



AGRICULTURAL RESEARCH INSTITUTE  
PUSA





CATALOGUE  
OF THE  
COLEOPTEROUS INSECTS  
OF  
THE CANARIES  
IN THE  
COLLECTION  
OF THE  
BRITISH MUSEUM.

BY  
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## P R E F A C E.

THIS Catalogue contains the description of the Coleopterous Insects collected by M<sup>r</sup> Wollaston and some of his friends in the Canary Islands.

The Collection has been arranged by M<sup>r</sup> Wollaston, and has been purchased by the Trustees of the British Museum.

JOHN EDWARD GRAY

Jan 30, 1864



## INTRODUCTORY REMARKS

THE material from which the following Catalogue has been compiled is mainly the result of an expedition to the Canaries undertaken by John Gray, Esq , and myself, in his yacht 'The Miranda,' at the commencement of 1858, in which we visited all the islands of the archipelago except Grand Canary. We reached Teneriffe on the 8th of January, and were immediately joined by the Rev R T Lowe (who was passing the winter at Orotava), and set sail at once for Lanzarote. As it was part of Mr Gray's programme to make a *detour* by the West Indies on his homeward route, he left us at the end of February, from which date, until the following July, Mr Lowe and I continued incessantly at our respective vocations (which were, chiefly, Botany and Coleoptera)—at first in Teneriffe, but afterwards in Grand Canary and Palma, exploring many remote regions (more or less difficult of access) which abundantly repaid us for the many obstacles which were sure to beset the progress of English travellers in such little-frequented spots.

Encouraged by the success I met with during this first trip, I again left England at the end of the same year, and, joining the Rev R T Lowe at Madeira, arrived once more (in company with him) at Teneriffe, on the 5th of February 1859, and, after a fortnight's delay at S<sup>ta</sup> Cruz, a second time embarked for Lanzarote. Our researches, now, were continued principally in that island and Fuerteventura, though, after Mr Lowe's departure for England on April the 19th,

I spent six weeks by myself in Teneriffe—principally in the higher districts towards the Peak, and ascending to the lower limits of the snow. It was during this short interval that some of my most valuable material was accumulated, and I look back to that brief sojourn in those wild upland tracts—amongst full-blown “Retamas” of delicious fragrance, far above the cloud-line, in what an entomologist might strictly call “an apianian heaven”—as embodying reminiscences, of sight and sense, which none but those who have revelled in such scenes can truly appreciate.

In addition to my own material thus amassed (including, at least, some 20,000 specimens), and that obtained by Mr. Gray in January and February of 1858, I have had the advantage, while compiling this Catalogue, of several smaller collections which have been submitted to me. Of these, by far the most valuable and important was formed by Dr. Crotch during the spring of 1862, and to his accurate and indefatigable researches (to which I shall often have occasion to allude) nearly 50 additions to the fauna are entirely due. Much useful material has likewise been communicated, from time to time, by my excellent and worthy friend the Barão do Castello de Paiva of Lisbon, who has spared no pains to procure specimens, which he has on every occasion, with characteristic generosity, placed at my immediate disposal. From Professor Heer also, of Zurich, I have received many types of the species from which he prepared the list for M. Hartung's volume on Lanzarote and Fuerteventura, and, indeed, M. Hartung himself allowed me to select a certain number of them from his boxes, when I chanced to meet him in Madeira, on his return from his Canarian explorations. And I am happy to be able to add that the various novelties which have been brought to light from these different sources I have been permitted, through the liberality of their several possessors, to place in the National Collection.

Feeling the paramount importance, in a Catalogue like the present one, of the *most thorough accuracy* in the faunas of the separate parts of the Group, I should state that I have used the utmost caution in the insular distribution of the various species enumerated. In all cases where the existence of the latter in any particular island rested upon doubtful evidence, *I have preferred their non-admission into that island's fauna to the risk of a possible error* (even though that risk were, practically, almost nil). And I hope it will not be considered presumptuous if I record my conscientious belief that *no single mistake has occurred in the Topographical Index* of this volume. Indeed

by far the greater proportion of the species have been entered into its columns on the evidence supplied by my own actual experience, and I would call attention to the fact that I adopted a method of annotation of every specimen which I collected so as effectually to prevent even the *possibility* of after-confusion as to the exact island in which it was found. And since the same mode was carried out (I am satisfied, with equal care and honesty) by Dr. Crotch, whilst the captures of Mr. Gray were made whilst we were together, and were entered duly in a list prepared roughly at the time, there seems scarcely an opening for anything approaching to a serious topographical blunder. I lay such great stress upon the complete accuracy of the *habitats* because observation has convinced me how widely some parts of the Group differ in their Coleopterous population from others, and that consequently, if any sound deductions are to be ventured upon from the local distribution of the several forms, the very ground work on which they must be based will be worse than useless unless established *with the most perfect truthfulness and precision*.\*

Of the 930 species enumerated in this Catalogue, only 77 have escaped my own personal observation, and of these 77, no less than 44 are (as lately stated) due to the researches of Dr. Crotch. Of the remaining 33, four<sup>1</sup> were taken solely by Mr. Gray, one<sup>2</sup> by my late

\* It would be a happy thing if this principle were more strictly adhered to by naturalists, as a rule, for many grievous geographical misstatements, which when once published can seldom be absolutely *disproved* (even though acknowledged afterwards as false on mere negative evidence), would have been thus avoided. I need not adduce instances of this, for our Catalogues teem with them; but, as a case which closely concerns us here, I may just add that I have myself received from the continent, as "*Teneriffan*," insects which I am quite satisfied were never found except in the two eastern islands of the archipelago—Lanzarote and Fuerteventura—in which the fauna, *as a whole*, is very peculiar, and has more of an African element in it than is the case in the other portions of the Group. Yet these species were pronounced unhesitatingly to be *Teneriffan* (and have perhaps been disseminated throughout Europe as such) simply because *they had been sent from Teneriffe*. And thus, in all probability, the present Catalogue, which defines their range in accordance with the plainest facts, will be at once regarded by the possessors of those insects as guilty of a very serious *error of omission*. Surely it would be far wiser, where specimens are received unaccompanied by any positive assertion of the exact localities in which they were taken, *not* to attempt to define the latter too rigidly. For, in the instance just alluded to, would it not have been better to have called them simply "*Canarian*" (which would have been strictly true) than "*Teneriffan*" (which happens to be entirely false)? I entreat entomologists to consider for themselves whether a slight omission of *precise habitat* (which is of no moment in a general collection) is not at all times preferable to a downright misstatement.

<sup>1</sup> *Symbiotes pygmaeus*, Hampe, *Apion ceuthorhynchoides*, W., *Helops rimosus*, W., and *Anthicus angustatus*, Cuv.

<sup>2</sup> *Chonius Armitaga*, W.

finding the Rev W J Armitage, one<sup>3</sup> by M Hartung, seven<sup>4</sup> have been communicated by the Barão do Castello de Paiva, one<sup>5</sup> by Mr A Fry of London, four<sup>6</sup> were captured by Mr Gray and Dr Crotch, one<sup>7</sup> by the Rev R T Lowe and Dr Crotch, one<sup>8</sup> by M de la Peirraudière and Dr Crotch, two<sup>9</sup> have been inserted on the evidence of specimens received from Paris (from MM Chevrolat and Deyrolle, respectively), and eleven<sup>10</sup> have been added from the meagre list of M Biullé given in the 'Histoire Naturelle des Iles Canaries' of MM Webb and Berthelot

As regards this work, I may be permitted to advert to the poverty of the catalogue of the Canarian Coleoptera (numbering in all but 179 species<sup>1</sup>), to the inaccuracies, which I have been compelled to advert to *seriatim*, to the discrepancy of the names of many of the insects as given in the letter-press and on the Plates (the latter of which are not alluded to in the former), to the wrong identification of the majority of the already-known species, to the complete silence throughout respecting the various *habitats*, to the absence of any remark of local interest, and to the almost conclusive evidence which I possess of some few of even those 179 species *not being Canarian at all*\* (but having been brought from Madena by Mr. Webb) When we consider that the insect-population, in the Canarian islands, at least trebles in extent the representatives of all the other departments of

<sup>3</sup> *Arthrodes Hartungii*

<sup>4</sup> *Lixus anguiculus*, Schon, *Laparocerus morio*, Schon, *Hesperophanes senex*, W, *Zophosis 4-carinata*, Deyr, *Carabus faustus*, Br, *Buprestis Bertheloti*, Br, and *Cossyphus insularis*, Lap,—the last three of which are also included in MM Webb and Berthelot's work

<sup>5</sup> *Silpha figurata*, Br (likewise recorded by MM Webb and Berthelot)

<sup>6</sup> *Oxyomus brevicollis*, W, *Notiomimus holosericeus*, W, *Arthrodes parcepunctatus*, W, and *Lithocharis debilicornis*, W

<sup>7</sup> *Leparthrum Loweii*, W

<sup>8</sup> *Hololepta Perraudieri*, de Mars

<sup>9</sup> *Acalles Æonu* (Chev), W, and *Pimelia ambigua*, W

<sup>10</sup> The evidence for the admission of these eleven species will be found under each of them. But as M Biullé does not indicate the *localities* of the insects included in his list, they are all, *except one* (the *habitat* of which I ascertained in Paris, from a note appended to MM Webb and Berthelot's type), *unmarked* (as regards their respective *islands*) in my 'Topographical Catalogue,' though admitted into the general list. The "one" referred to is the *Pimelia canariensis*, Br and the remaining ten (concerning which further evidence is required) are as follows —*Dytiscus cucumiflexus*, F, *Birosus spinosus*, Ahl, *Attugenus pellio*, L, *Ootoma obscura*, Br, *Hesperophanes rotundus*, Br, *Clytus Webbi*, Lap, *Tentyria interrupta*, Lat, *Pimelia fornicata*, Hbst, *Pimelia sparsa*, Br, and *Ischnomera melanura*, L

\* With respect to this last assertion, I must refer to my foot-note on p 7, though, did space permit, I might add much more on the same subject

organic nature\*, it is impossible to avoid surprise that the Coleoptera should have been thus dealt with in so voluminous a History as that of MM Webb and Berthelot. I would by no means, however, wish it to be assumed that I consider the present enumeration as even approaching to a complete one. On the contrary, indeed, I do not venture to suppose that I have gleaned more than the firstfruits, yet I hope that it will at least constitute a basis (sufficiently accurate, as far as it goes) for a more perfect treatise to be built upon. And although I feel that there is yet much, very much, to be done in every island of the cluster, I think nevertheless I may safely anticipate that the *general catalogue*, at all events, will be found to give a really true (though approximate) idea of the Canarian Coleoptera *as a whole*. With respect to the separate lists of each island, the great practical difficulty of filling them up should be borne in mind. Indeed to reach the remoter islands *at all*, and to *omit none* of them moreover in a widely scattered assemblage, the extremes of which are removed from each other by nearly 200 miles of stormy ocean, is no easy task†, therefore how much more to deal with each of them as a distinct country, and to begin afresh in every case (which necessarily involves a considerable amount of time) to collect its commonest productions! In the Canarian Group, where the islands are seven in number, the labour has been the same as in the exploration of seven *countries* (of similar extent), and it will consequently be seen that, whilst the species which I have recorded for the entire archipelago is 930, the asterisks (in the Topographical Index) for the islands collectively—which, so far as the *work of observation* is concerned, might have been indicative of so many separate *species*—amount to 2043. It may be interesting to notice the proportions thus arrived at for the species hitherto observed in the several islands —

\* There is, in the 'Histoire Naturelle des Iles Canaries' above cited, a Chapter, devoted to what are called "philosophical speculations," in which reasons are given why insects *cannot* be common at the Canaries. A great deal is there said about the trade-winds, moisture, the general state of the atmosphere, &c., but I must profess myself quite incompetent to understand it. It would have been better to have gone out into the open country and *observed facts*. I can only say that I chose this plan, and *found insects in profusion*.

† MM Webb and Berthelot appear never to have set foot on Hierro, and so dispose of it summarily by saying that it has no harbours, no rivers, no water of any kind—a mere barren rock, insignificant and devoid of interest. For my own part I found it (in proportion to its size) the most remarkable island of the seven, and the noble forests with which it is clothed on its western slopes are not to be equalled elsewhere throughout the archipelago. Indeed, apart from every other circumstance, its mere topographical position with respect to the remainder of the Group invests Hierro with a charm peculiarly its own.

Lanzarote	277
Fuenteventura	261
Grand Canary	325
Teneriffe	539
Gomeia	222
Palma	254
Henio	165
	<hr/> 2043

Although I have good reason for suspecting that a small number of even the 179 species recorded by MM Webb and Berthelot were (as just stated) brought from Madeira, whilst others (as, for instance, the *Eriodius europæus*, the *Akis acuminata*, and perhaps also the *Tentyrina interrupta*) were accidental importations from the coast of Africa [on which subject *vide* my remarks at pages 438 and 469], I have nevertheless alluded to them briefly in foot-notes (in their proper positions), though without further evidence I could not admit them into the body of this volume. There are three, however, which I believe I have passed over in *total* silence,—namely, the *Cucindela nilotica*, Dej, the *Mononyx variegatus*, Br, and the *Colaspis barbara*, Fab. It is certainly *possible* that a *Cucindela* may exist in some of the sandy regions of Lanzarote, Fuerteventura, or Grand Canary, yet the singular absence, *so far as my own observations are concerned*, of that widely spread genus both at the Madeiras and Canaries inclines me to look with unbounded suspicion on its supposed occurrence in these islands, and I shall at all events require stronger evidence than that supplied by MM Webb and Berthelot, who give us no vestige of information about it, before I acknowledge it as Canarian. The *Mononyx variegatus* may perhaps be a small Curculionid from some portion of the Group, but I could get no sight of it in Paris, and as no genus has ever been enunciated (so far as I am aware) under the title of *Mononyx*, it is impossible even to guess at its affinities (so that no position *could* be assigned to it in this Catalogue). If, however, M Brulle intended himself to establish the group, there and then, *without* a diagnosis (which is the only solution that occurs to me), he has at least chosen a most unfortunate name—for the insect figured has decidedly two claws. The *Colaspis barbara* is a north-African form, and although, in like manner, it too *may* be Canarian, I cannot possibly treat it as such—without a single published remark either as to its identification or *habitat*, and with the well-founded suspicion (above alluded to) that a certain proportion of MM Webb and Berthelot's recorded species

were chance introductions (such as have occurred, to my own certain knowledge, in trading-vessels) from the opposite coast of Morocco

Although many widely spread genera (such as *Canabus*, *Silpha*, *Tentoria*, and *Pimelia*) are represented at the Canaries which are absent from the Madenas, nevertheless, on the whole, I think that the latter Group is, *in proportion to the aggregate superficies of its separate parts*, the more productive of the two. Probably, however, this is merely owing to the greater depauperation of the former through the destruction of the timber, and (as a necessary consequence) the gradual drying up of the pools and streams—which there is abundant evidence to show were once numerous. But, be this as it may, the fact itself seems plainly indicated by the relative extent of their Coleopterous faunas—that of the Madeiran archipelago numbering, up to the present date, 660 species, whilst that of the Canarian one (the product of *seven large* islands) includes hitherto but 930. We must undoubtedly bear in mind that the Madeiras have been more thoroughly examined than the Canaries, yet, even whilst making a liberal allowance for this consideration, I do not believe that the Canarian Coleoptera will ever prove to be so numerous in species, *in proportion to the area ranged over*, as the Madeiran. Nor have the two faunas quite so decided a resemblance as I should have *a priori* anticipated, seeing that 224 species is all that they have yet been demonstrated to possess in common. There are, however, a certain number of ordinary (perhaps naturalized) forms, *in both cases*, which we may feel quite sure will be shown, sooner or later, to be mutual, therefore we may safely imagine the above number as raised, at all events, to 250. Yet even that proportion is but a small one, in islands so manifestly belonging to the same geographical system, and with their many physical peculiarities nearly similar.

Adverting to the general statistics, it is interesting to observe that the great Sections (whatever their *relative* positions may be, in a system of classification) into which the Coleoptera are usually supposed, either by acknowledgment or tacit assumption, to be subdivided bear pretty nearly *the same numerical proportions amongst themselves* in the two Groups. Thus, in both instances, the *Rhynchoptera* exceeds every other department in the number of its representatives, whilst the next in order is the *Brachelytra* and the *Eucerate* and *Hydradeiphaga* occupy, either actually or almost, the lowest positions. The *Heteromera* at the Canaries follows third in numerical succession, and is more pronounced than at Madeira, whilst the

*Geodephaga*, on the contrary, is, in proportion to the area, rather less so. The following Table, as compared with the corresponding one in the Madenian Catalogue, will show this more clearly —

<i>Rhynchophora</i>	176
<i>Brachelytra</i>	141
<i>Heteromera</i>	125
<i>Necrophaga</i>	114
<i>Geodephaga</i>	113
<i>Procerata</i>	89
<i>Cordylocerata</i>	51
<i>Phytophaga</i>	44
<i>Hydrophaga</i>	22
<i>Philhydra</i>	21
<i>Pseudotimeria</i>	19
<i>Eucerata</i>	15
	<hr/> 930

Of the *genera*, as yet detected at the Canaries, the largest (and by far the most characteristic) is *Laprocerus*—of which no less than 35 exponents have already been brought to light (and there are probably many yet to be found)\*. The next is *Homalota*, but as a considerable proportion of the minute Staphylinids which compose that immense group are eminently liable to accidental diffusion (through indirect human agencies) over the civilized world, I lay but little stress upon this fact. But the third in order, namely *Hegeter*, is quite as significant as the first—numbering no less than 19 species†. Then follow *Calathus* and *Attalus*—both of which are largely expressed, and have 17 representatives (manifestly quite indigenous). *Aprion* has 15, but some of them may perhaps have been introduced. *Bembidium*, *Arthrodes*, and *Philonthus* have each 14, *Acalles* and *Longitarsus* 13 (the former being equally developed, or even more so, at Madeira). *Saprinus*, *Pimelea*, *Helops*, and *Anthicus* number, each of them, 12, *Aphanarthrum* 11 (all *ultra*-indigenous), *Hydroporus* 10, and *Tarphius* (likewise positively endemic, and of which more will doubtless yet be found) 9. Indeed *Tarphius*, as I have elsewhere shown, is almost *characteristic* of the intermediate sylvan districts of the whole of these Atlantic Islands, nevertheless it is decidedly more dominant at Madeira (where no less than 20 exponents have already been observed) than at the Canaries.

\* \* I include with *Laprocerus* my genus *Atlantis*.

† I include *Thalpophila* and *Gnophota* (which are scarcely more than subgenera) with *Hegeter*.

But space will not permit me to enter into further details. Suffice it to add that the two eastern islands of the archipelago, Lan-a-roto and Fuaiteventua seem to possess more of an African element than the central and western ones—as is evinced by their very peculiar fauna, which has a good deal in common with that of the opposite coast of Morocco, and they appear to me to bear about the same relation to the remainder as, in the neighbouring Group, Porto Santo does to Madeira proper. The *entire* Canarian Catalogue, however, is not more indicative of a *southern* latitude than is the case with that of Madeira (at any rate not more so than would be naturally anticipated were the slight additional distance to the south measured over a continuous tract)—its general character being much what we should *a priori* expect to find on the southern Mediterranean limits, though at the same time there is, as in Madeira, so large an assortment of purely endemic forms as perhaps to be suggestive rather of a separate “Atlantic province”

Although only a portion of them have been described in this volume, I believe that about 30 genera and 540 species have been established by myself (partly in detached Papers, severally referred to) amongst the Canarian Coleoptera here enumerated. Whatever other forms there are (in addition to these) which it has fallen to my lot to be the first to enunciate are found at Madeira likewise, and were therefore published amongst the novelties of that Group

Teignmouth, Jan 25, 1864



# CATALOGUE

OF

## CANARIAN COLEOPTERA.

### Fam. 1. CARABIDÆ

(Subfam I ELAPHRIDES)

#### Genus 1 NOTIOPHILUS

Duméril, *Consid. gen. sur les Ins* 169 (1823)

#### 1 *Notiophilus geminatus*

*Notiophilus geminatus*, Dej., *Spec. des Col.* v 589 (1831)

— —, Brulle, in *Webb et Berth (Col)* 58 (1838)

— —, Woll, *Ins. Mad.* 17 (1854)

— —, Ill., *Cat. Mad. Col.* 9 (1857)

*Habitat* in Lanzarote, Fuerteventura, Canaria, Teneriffa, Gomera et Hierro, passim

The *Notiophilus geminatus* (which I have detected in three, out of the five, Madeira islands, and which occurs throughout southern Europe and the north of Africa) is almost certainly *universal*, though nowhere very common, at the Canaries. I have taken it in Lanzarote, Fuerteventura, Grand Canary, Teneriffa, and Hierro (in which last island it was captured equally by Mr Gray), and it was found by Dr Clotch in Gomera. There can be but little doubt, I should imagine, that it must exist in Palma likewise. From Teneriffe it has also been communicated by the Barão do Castello de Paiva.

(Subfam II CARABIDES)

#### Genus 2 LEISTUS

Frohlich, *Naturf.* xvm 9 (1794)

#### 2 *Leistus nubivagus*, n. sp.

*L. oblongus*, depressus, castaneo-ferrugineus, nitidus, prothorace brevi, transverso, ad latera (praesertim postice) explanato et sub-

æqualiter rotundato, per basin profunde sed paucè punctato necnon etiam antice in medio punctis paucis minoribus notato, postice utrinque foveâ magnâ impresso, elytris depressis, profunde crenato-striatis, stria tertiâ in singulis punctis quatuor auctâ, antennis, palpis pedibusque (femoribus plus minus obscurioribus exceptis) testaceis vel rufo-testaceis — Long corp lin  $2\frac{2}{3}$ —3

*Habitat* Teneriffam, rarissimus, sub lapidibus humidis in montibus sylvaticis excelsis circa Agua Mansa tempore vernali captus

This interesting little *Leistus*, remarkable *primâ facie* for its small size and flattened surface, appears to be of the greatest possible rarity, and confined (so far as I have observed hitherto) to the damp sylvan regions, of a high elevation, in Teneriffe. I first captured it, in May 1858, beneath moist stones at the Agua Mansa, and subsequently (during May of the following year) in the same locality and at the foot of the lofty Organo Rocks

### Genus 3 **NEBRIA**

Latreille, *Gen Crust et Ins* 1 225 (1806)

#### 3 *Nebria dilatata*

*N* picea, latiuscula, prothorace subcordato, ad latera late explanato et valde reflexo, antice valde profunde emarginato, angulis anticis valde poriectis acutiusculis, elytris ellipticis, postice subacuminatis, alutaceis, subcrenato-striatis, palpis, antennis pedibusque clare ferrugineis — Long corp lin 6—6 $\frac{1}{2}$

*Nebria dilatata*, Dej, *Spec Gen des Col* v 580 (1831)

——, Brulle, in *Webb et Berth* (Col) 58 pl n f 7 (1838)

*Habitat* sub lapidibus humidis in montibus excelsis Teneriffæ, rarissima, inter 4000' et 6000' s m præcipue degens.

The superb *Nebria* which I have redescribed above (and which was wrongly stated by Dejean, in his 'Species Gén des Coléopt,' to come from Madeira) appears to be peculiar to the lofty elevations of Teneriffe,—where it occurs principally at the base of wet rocks and near trickling streams from about 4000 to 6000 feet above the sea. It is, however, extremely rare, and, from its inhabiting ledges and spots often all but inaccessible, very difficult to find. I first obtained it, on the 30th of April 1859, in the ravines of the great Pinal which clothes the ascent to the Cumbre adjoining the Cañadas, above Ycod el Alto, and during the following month I met with it, more abundantly, on the damp mountain-ridges around the Agua Mansa and the Organo Rocks

4 *Nebria curiax*, n sp

*N* nigra, angustula, nitida, prothorace subcordato, ad latera anguste explanato et paulo reflexo, antice sat profunde emarginato, angulis anticis sat porrectis, elytris ovalibus, striatis, striâ terciâ in singulo punctis circa quatuor auctâ, palpis, antennis (articulis tertio quatuorque obscurioribus exceptis) tarsisque ferrugineis, femoribus tibusque piceis — Long corp lin 5½

*Habitat* Canariam Grandem, inter lapides juxta rivulum prope oppidum Teror mense Aprilis a d 1858 duo specimina deprehendi

The only two examples of this very rare and distinct *Nebria* which I have hitherto seen were captured by myself amongst the wet stones and rubbish of a small stream, in the island of Grand Canary, which joins the little river at Teror, within half a mile of the town—during my residence there, with the Rev R T Lowe, in April 1858. It belongs to the same type as the *N dilatata*, but its narrower outline, less elliptic, brighter elytra (the striæ of which are less perceptibly crenulated), rather smaller size and darker hue, in conjunction with its less widely margined and less deeply excavated prothorax, will (apart from other differences) at once separate it from that insect

## Genus 4 CALOSOMA

Weber, *Observat Entom* 20 [script *Callosoma*] (1801)

5 *Calosoma indagator*

*Carabus Madeiræ*, *Fab*, *Syst Ent* 237 (1775)

— *Indagator*, *Fab*, *Mant Ins* 1 197 (1787)

*Calosoma Indagator*, *Dej*, *Spec Gen des Col* 11 205 (1826)

— *Madeiræ*, *Brulle*, in *Webb et Berth* (*Col*) 58 (1838)

— —, *Woll*, *Ins Mad* 15 (1854)

— —, *Id*, *Cat Mus Col* 7 (1857)

*Habitat* in Canaria, Teneriffa et Palma, passim

Although not the older of the two, I have preferred the name of *indagator* for the present *Calosoma* to that of *Madeiræ*, since it is the one under which the insect is almost universally known, and since the *author* of them both is the same. In this particular instance it would seem better *not* to retain the specific title of *Madeiræ*, for the insect is widely spread over Mediterranean latitudes (being by no means peculiar to Madeira), and is usually recognized as the *C indagator*. It is out of deference to the opinion of my friend Dr Schaum that I have thought it desirable to make this slight change, for it will be seen, on reference to my 'Ins Mad,' that I adhered in that volume strictly to priority, and quoted the species by the name ( irrespective of its *appropriateness*) under which it was first published by

Fabricius—who afterwards redescribed it under a fresh title, which has nevertheless been generally adopted

The *C indagator*, which is rather common in the Madenan Group (being found in Madeira proper, Porto Santo, and even on the Desertas), is decidedly scarce at the Canaries,—where nevertheless it is probably universal throughout the central and western portions of the archipelago, for, although hitherto I have observed it only in Grand Canary, Teneriffe, and Palma, there can be but little doubt that it must exist in Gomera and Hierro likewise. In the two eastern islands, however, of Lanzarote and Fuerteventura, it apparently does *not* occur,—its place being there supplied by the following species, which I have referred to the *C azoricum* of Heer. In Teneriffe it was taken also by the Rev R T Lowe, the Barão do Castello de Parva, and Dr Clotch

### 6 *Calosoma azoricum*

*C præcedenti simile, sed vix nitidius, prothorace subminore, postico paulo angustiore (quare ad latera in medio vix magis subangulato-ampliato), angulis posticis sensim acutioribus ac magis productis, foveâ magnâ profundiore utrinque impresso, elytris rugosius et vix densius imbricatis, ad humeros subiectioribus, et punctis in seriebus tribus paulo magis numerosis, tubis sublongioribus gracilioribusque, omnibus in foeminâ (foisan in utroque sexu?) rectioribus*

*Mas* adhuc latet —Long corp lin 10–11

*Calosoma azoricum* ♀, Heer, *Fossil Calosom* 5 (note)

*Habitat* in Lanzarota et Fuerteventura, rarissimum

Two specimens of *Calosoma*, captured by myself in Lanzarote and Fuerteventura respectively, seem to be distinct from the *C indagator*, so widely spread over the other islands of the archipelago, and to be better referred to the *azoricum* of Heer. At least, after a careful comparison of them, recently, by Dr Schaum and myself, with types from the Azores, we could neither of us detect any differences of sufficient importance to be regarded as specific ones,—though in a few minor particulars they do not *exactly* agree with the latter, and, moreover, being unfortunately females, we were unable to say for certain whether the intermediate tibiae of their male sex are in any degree curved as in the *indagator*. Be this however as it may, it seems pretty evident (on other accounts) that they cannot be identified with the *indagator*, whilst the characters of at all events the female sex differ so *very* slightly from the corresponding ones of the *azoricum* that there seems the greatest *probability*, even in the absence of the male to judge from, that *all* their features will be found to be so far identical with those

of that insect that it will not be possible to treat them, at the utmost, as indicative of more than a mere geographical variety (and that too an exceedingly trifling one) of the same species. But, whilst thus expressing my conviction that it will be found, when further material has been obtained, to be coincident with the *azoricum*, I do not wish to ignore the fact that, in the Canarian insect (judging from the examples now before me), the prothorax is not *quite* so straightened (obliquely) behind, and therefore not quite so perceptibly subangulated on either side in the middle, and that the elytra are somewhat less closely reticulated, a trifle more rectangular at their shoulders, and with the punctures of their triple series apparently rather more numerous. Perhaps also its intermediate (female) tibiae are not *quite* so straight, though the difference (if any) is scarcely perceptible. If, when the male sex has been discovered, it should prove to be distinct from the *azoricum* (which, however, I think is very unlikely), I would propose for it the trivial name of *canariense*.

From the *C. indagator* the present *Calosoma* may be known by its prothorax being a little smaller and rather more narrowed behind (which causes it to be a trifle less obtusely rounded, or more *subangulated*, on either side in the middle), with its posterior angles perceptibly acuter, or more downwardly-produced, and with its basal foveae larger and deeper, by its elytra being somewhat more roughly and closely imbricated, a little more *rectangular* at the shoulders, and with the metallic points of their three longitudinal series rather more numerous, and by all its tibiae, at any rate in the female sex (for which I can alone speak), being straighter, and perhaps a trifle longer and slenderer.

## Genus 5 CARABUS.

Linnaeus, *Syst. Nat.* ii 668 (1767)

### 7 *Carabus coarctatus*.

*C. cupreo-aeneus* vel *subaenescens*—(interdum *virescenti*—) *niger*, nitidus, prothorace postice subito et valde coarctato, angulis ipsis posticis longe exstantibus, elytris ovalibus, limbo plus minus laete virescente, longitudinaliter triseriatim parce tuberculatis (tuberculis elongatis) necnon obsolete costatis, antennis longiusculis pedibusque obscurioribus—Long corp. lin 9–10

*Carabus coarctatus*, Brulle, in Webb et Berth (*Col.*) 57 pl. ii f. 2 (1838)

*Habitat* Canariam Grandem, sub lapidibus in locis plus minus editioribus, rarissime

The *C. coarctatus* (so well distinguished *primâ facie* by its pro-

thorax being suddenly and greatly constricted behind, but with the posterior angles themselves exceedingly prominent) would appear, so far as I have observed hitherto, to be peculiar to the intermediate and higher elevations of Grand Canary,—where, during March and April of 1858, I took it sparingly beneath stones throughout the dry, cinderly district of El Monte, as well as on the summit of the Bandama mountain, and on the ascent to the Roca del Soueilho, above San Mateo

### 8 *Carabus faustus*

*C. cupreo-æneus* vel subænescenti- (interdum virescenti-) niger, nitidus, prothorace elongato-subquadrato (postice paulo et æqualiter angustiore), elytris elongato-ovatis (versus basin ad latera oblique subiectis et pone medium paulo latioribus), limbo plus minus læte virescenti, longitudinaliter triseriatim tuberculatis necnon plus minus distincte costatis, antennis pedibusque elongatis robustis, obscurioribus — Long corp lin 12–13

*Carabus faustus*, *Brulle, in Webb et Berth (Col)* 57 pl n f 3 (1838)

*Habitat* Teneriffam sylvaticam, rarissimus

I have not, myself, ever taken this *Carabus*, but I have received it from Dr Heer of Zurich, captured by M Hartung in Teneriffe, and it has also been communicated by the Baão do Castello de Parva from (the Agua Garcia of) the same island. If therefore the few specimens which I have seen be typical of the species, I may add that it may be known from the *C. interruptus* by its considerably larger size and more shining surface, by its longer and robust limbs, and by its prothorax and elytra being each of them more elongated,—the former being more (obliquely) straightened behind, and the latter more so in front. The posterior thoracic angles, also, are a little more backwardly-produced. It is evidently extremely rare, and is probably attached to a rather lower elevation within the sylvan districts than its ally

### 9 *Carabus interruptus*

*C. cupreo-æneus* vel subænescenti- (interdum virescenti-) niger, subnitidus, prothorace subquadrato (postice paulo et æqualiter angustiore), elytris ovatis, limbo plus minus læte virescente, longitudinaliter triseriatim tuberculatis necnon plus minus distincte costatis, antennis pedibusque obscurioribus — Long corp lin 8½–vix 10

*Carabus interruptus* (*Lat*), *Dej, Spec Gen des Col* v 547 (1831)

— abbreviatus, *Brulle, in Silb Rev Ent* iii 298 (1835)

*Habitat* in regionibus humidis excelsis Teneriffæ, usque ad 6000' s m ascendens

The smaller size, somewhat less shining surface (particularly of the female sex), and more rounded elytra of the *C. interruptus*, in conjunction with its more abbreviated prothorax and shorter limbs, will, apart from minor characters, at once separate it from the preceding species. It was erroneously stated by Dejean to be a native of Madenia,—being confined, apparently, to the intermediate and lofty elevations of Teneriffe, where I have taken it at the Agua Mansa, and on the damp and almost inaccessible slopes above the Organo Rocks, abutting on the Cumbre. It was also captured above Ycod el Alto by Dr Crotch, and has likewise been communicated by the Barão do Castello de Paiva.

As regards the synonymy of this *Canabus*, it seems that M. Brullé changed the name of *interruptus*, under which it was described by Dejean, into that of *abbreviatus*,—on account of the former having been preoccupied by Say for a North American species. But since it would appear (from information which I have received from Dr Schaum) that Say's insect is undoubtedly conspecific with the *vinctus* of Weber (and is so acknowledged by the modern American Coleopterists), it follows that Say's title (for the *vinctus*) has to be suppressed, and that M. Brullé had consequently no sufficient reason for altering the name which Dejean proposed for the Canarian species\*.

### (Subfam. III. SCARITIDÆ)

#### Genus 6. SCARITES†

Fabricius, *Syst. Ent.* 249 (1775)

#### 10. *Scarites gigas*

*Scarites gigas*, *Fab., Spec. Ins.* 1: 314 (1781)

—, *Oliv., Ent.* iii. 36: 1 (1795)

—, *Pyraemon, Bon., Obs. Ent.* ii. 33 (1813)

—, *Dej., Spec. Gén. des Col.* 1: 367 (1825)

—, *Hartung, Geolog. Verhältn. Lanz. und Fuert* 140

*Habitat* in aenosis Lanzarotæ et Canariæ, rarissimus

The *S. gigas* (which occurs in the south of Europe and the north of Africa, and which I have myself taken at Mogadore on the coast

\* I should however add, in M. Brullé's defence, that he believed the *C. interruptus* of Say to be distinct from Weber's (and Dejean's) *vinctus*, but in this he was apparently mistaken.

† As I am determined not to include any species in this Catalogue which rests upon evidence altogether unsatisfactory, I do not apologize for refusing admission to a *Scarites* figured by M. Brullé (I cannot say "described," for the few words in which he alludes to it amount to no *description* at all) under the name of *S. dimidiatus*. Judging from the figure, which is really a very tolerable one, I have no hesitation whatever in identifying it with the Madenian *S. abbreviatus*,

of Morocco) appears to be very rare at the Canaries,—where it was found by Mr Gray and myself, during January 1858, near Arrecife in Lanzarote and subsequently, by myself, in the little island of Graciosa, off the north of Lanzarote, as well as at the *extreme* southern, sandy point of Grand Canary, in the district of Maspalomas. It was likewise captured in Lanzarote by M Hartung.

### Genus 7 DYSCHIRIUS

Bonelli, *Observat Entom* 1 (1809)

#### 11 *Dyschirius armatus*, n sp

*D* æneo-piceus, clypeo tridentato, elytris ovato-oblongis, profunde punctato-striatis, punctis postice evanescentibus, antennis pedibusque rufo-ferrugineis, tibus anticis extus longissime denticulatis—Long corp lin vix 2

*Habitat* in arenosis maritimis Lanzarotæ, rarissimus, per littera laus ejus salim “Januvio” dicta, sub ulvis ejectis, mense Martio a d 1859, tria specimina collegi

The comparatively large size and more piceous hue of this fine *Dyschirius*, in conjunction with its tridentate clypeus and the greatly developed spines of its fore tibia, will at once distinguish it from the following two species. It has been examined by my friend Dr Schaum, of Berlin, who has paid much attention to the genus, and who returned it with the observation “It is probably allied to the *D fulvipes*, Dej (unknown to me), but in that insect the marginal

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and have but little doubt that it was brought from Madeira by Mr Webb (along with the *Harpalus consentaneus* and *distingendus*, and possibly also the *Lexus angustatus*), and mixed-up by him with his Canarian collection. I have the most positive assurance from a personal friend of Mr Webb, that the latter collected in Madeira before he went to Tenerife, and that he was exceedingly careless and inaccurate with respect to the material which he was in the habit of amassing—a fact indeed which is proved to a demonstration through the circumstance of one of his Land-Shells (an *Achatina*) having been described by D’Olbigny (in MM Webb and Berthelot’s work) as a new Canarian species, but which *on reference to the type* may be seen to have in Mr Webb’s own handwriting a label attached to it bearing the words “Pico de Facho,”—which Pico de Facho (as the shell itself would in fact testify) is one of the mountains of Porto Santo (an island in which Mr Webb sojourned during May of 1828).<sup>1</sup> Now it so happens that the only character of any significance which M Brullé alludes to in his (so-called) description of the *S dimidiatus* is to the effect that its elytral striae are punctured. In the *abbreviatus* the striae are usually impunctate, nevertheless they have sometimes a tendency to be very faintly punctured even in Madeira proper and on the Desertas, but in Porto Santo they are nearly always very perceptibly punctate. So that I conclude, first, that M Brullé’s *S dimidiatus* is founded upon an example (since lost—for it does not now exist in the collection at the Jardin des Plantes, in Paris) of the *abbreviatus* brought by Mr Webb from Madeira, and secondly, that the specimen was, like the Land-Shell above referred to, a Porto-Santan one.

stria is said to be scarcely visible at the base" It is apparently very rare, the only three specimens which I have seen having been captured by myself, beneath east-np sea-weed, on the sandy shores of the curious salt-water lake known as "Januvio," towards the south-western extremity of Lanzarote,—during my visit to that remarkable spot, in company with the Rev R T Lowe, on the 26th of March 1859 I may add that, as has been so often observed in the *Dyschirius* of more northern latitudes, it was, even in that remote locality, associated with a *Bledius*,—a noble species somewhat akin to the European *bicornis*, and which I shall hope to describe under the name of *B Januvianus*

### 12 *Dyschirius subæneus*, n sp

*D æneo-* (vel subpiceo-) *niger*, clypeo simplici, elytris ovato-oblongis, profunde punctato-striatis, punctis postice evanescentibus, antennis pedibusque rufo-piceis, tibus anticis extus breviter denticulatis—Long corp ln  $1\frac{1}{2}$ — $1\frac{1}{2}$

*Habitat* in Canaria Grandi, per litora paludis lutosæ (nec salinæ) ad Arguimigum d 14 Ap A D 1858 depichensus

The present *Dyschirius* has very much the size and general aspect of the common European *D æneus*, with which indeed before examination I had regarded it as coincident A more careful inspection, however, has brought to light several small differential features, which it is the opinion of Dr Schaum must separate it specifically from that insect "It is distinct," says he, "from the *æneus* (to which it is closely allied) by the first and second striæ commencing in a deep point at the base, by the first stria being much deeper, and by the stronger teeth of its anterior tibiae It belongs to my Section B 2  $\beta$  aa (p 201)" I captured thirteen examples of it by brushing the fine grass along the muddy edges of the freshwater lake at Arguimigum, in the south of Grand Canary, during my visit there, with the Rev R T Lowe, on the 14th of April 1858

### 13 *Dyschirius pauxillus*, n sp

*D æneo-niger*, clypeo simplici, elytris subovato-oblongis, profunde punctato-striatis, punctis postice evanescentibus, antennis pedibusque rufo-piceis, tibus anticis extus vix denticulatis—Long corp ln  $1\frac{1}{2}$ .

*Habitat* Teneriffam, duo specimina (per acrem volitantia) prope "Puerto Orotava," mense Maio A D 1858, cepi

The smaller size of this little *Dyschirius*, combined with its fore tibiae being almost unaimed along their outer edge, will suffice to

distinguish it from the preceding ones "It belongs," says Dr Schaum, "to the same group as the *D. miscellus* (p 217 of my work), indeed it closely resembles the latter, but is distinct by the first stria beginning with a deeper impression at the base of the elytra." Two specimens only have as yet come under my observation,—captured (on the wing) immediately outside the Puerto Orotava, in Teneriffe, during May 1858

(Subfam IV BRACHINIDES)

Genus 8 **PHEROPSOPHUS**

Solier, *Ann de la Soc Ent de France*, ii 461 (1833)

14 **Pheropsophus hispanicus.**

*Brachinus hispanicus*, Dej, *Spec Gen des Col* i 303 (1825)

— — (Kollar), Dej, *Icon* ii 104 tab 8 fig 5 (1830)

— —, Brulle, in *Webb et Berth (Col)* 55 (1838)

*Habitat* Canariam Giandem, per litora paludis ad Arguñiguin a meipso captus, necnon etiam ex Teneriffa exemplar antiquum nuper communicavit cl Dom Chevrolat

This noble insect, which is found also in the south of Spain (and which is the only one of the larger *Brachinides* which has hitherto been recorded in Europe), occurs, though very rarely, at the Canaries. The only spot in which I have myself detected it is at the edges of the freshwater lake at Arguñiguin (the same locality in which I captured the *Dyschirius subcaneus*), in the south of Grand Canary, but I could only obtain seven specimens. I have an old example lately forwarded by M Chevrolat, of Paris, which is labelled "Teneriffe", and as it is highly probable that it may exist in that island also, I think we may, without much risk, quote it accordingly

(Subfam V DRYPTIDES)

Genus 9 **POLYSTICHUS**

Bonelli, *Observat Entom* tab (1809)

15 **Polystichus brunneus**

*P. apterus*, pallide rufo-brunneus, ubique pubescens, capite prothoraceque nitidis, hoc profunde sed parce punctato, illo confertius et paulo densius punctato, postice valde angustato, basi apiceque recte truncato, in medio profunde canaliculato necnon utrinque versus angulum posticum longitudinaliter impresso, elytris minus nitidis, depressis, profunde subcrenato-striatis, interstitiis sub-

convexis et minutissime punctulatis, antennis, palpis pedibusque rufo-testaceis — Long corp. ln 4-4½

*Polistichus brunneus*, Dej, *Spec Gen des Col* v 298 (1831)

— unicolor, Bt, *Hist Nat des Ins* iv 179 pl 6 f 2 (1834)

*Habitat* sub lapidibus in regionibus excelsis Teneriffæ, usque ad 9000' s m ascendens

Judging from the description, there can, I think, be but little doubt that the present *Polystichus* is identical with the *P brunneus* of Dejean (whose *habitat* for it, of "Brazil," was consequently altogether erroneous) and such, I may add, is likewise the opinion both of the Baron Chaudoir and Dr Schaum. Hence the name proposed for it, subsequently, by M. Brullé must of necessity be cancelled. It is one of the most beautiful of the Canarian Coleoptera, and is confined (so far as I have observed hitherto) to the higher elevations of Teneriffe. Indeed the only spot in which I have captured it (and even there but very sparingly) is the lofty Cumbre (on the ascent to the Peak) adjoining the Cañadas,—from about 8000 to 9000 feet above the sea, where, at the beginning of May 1859, I took it from under stones (occasionally within a short distance of the snow), in which locality it has subsequently been found by Dr Crotch. A single example, however, from an old collection at St Cruz, has lately been forwarded to me by the Barão do Castello de Paiva, purporting to have been taken in the "Barranco de San Domingo, near Laguna."

## (Subfam VI LEBIADES)

### Genus 10 DROMIUS

Bonelli, *Observat Entom* 1 tab syn (1813)

#### 16 *Dromius agilis*.

*Carabus agilis*, Fab, *Ent Syst* 1 139 (1792)

*Lebia agilis*, Gyll, *Ins Suec* ii 186 (1810)

*Dromius agilis*, Dej, *Spec Gen des Col* 1 240 (1825)

— —, Schaum, *Nat der Ins Deutsch* 1 268 (1860)

*Habitat* in ins<sup>a</sup> Fuerteventura, Aprilis mense a D 1859 semel captus

A single specimen (somewhat immature) of what appears undoubtedly to be the common European *D agilis* was captured by myself, beneath a stone, in a small, dry, rocky ravine immediately outside the little town of St<sup>a</sup> Maria Betancuria, of Fuerteventura, during my sojourn there, with the Rev R T Lowe, at the beginning of April 1859

17 *Dromius amœnus*, n sp

*D* elongatus, nitidus, capite prothoraceque rufo-ferrugineis, illo magno elongato, hoc elongato, postice angustiore subrecto, in medio profunde canaliculato, limbo plus minus dilutiore, elytris elongato-ovatis, leviter striatis, testaceis, suturâ fasciâque pone medium dentatâ (necnon interdum limbo) nigro-fuscis, antennis palpisque testaceis, pedibus pallido-testaceis — Long corp ln  $2-2\frac{1}{4}$

*Habitat* in sylvaticis excelsioribus Teneriffæ, sub cortice arborum laxo latitans In sylvâ Las Mercedes, necnon supra Taganana cepi

This large and beautiful *Dromius* may be regarded as the Canarian representative of the Madeiran *D insularis*,—to which, although exceedingly distinct from it specifically, it is closely allied Apart, however, from the somewhat darker hue of its head and prothorax (the former of which is less strigulose in the *centre*, whilst the latter is more elongate and *straighter behind*), it differs from that insect in its brighter surface, and convexer and more rounded elytra—which have their striæ less impressed, and their postmedial fascia *broaden* (extending in fact to the outer margin, which is itself also usually more or less blackened or infuscated) It is apparently very rare, or at any rate local, and confined (so far as I have observed hitherto) to the sylvan regions on the north-eastern mountains of Teneriffe, from the wood of Las Mercedes to Point Anaga In the former I took it, not uncommonly, from beneath damp loosened bark, during June 1858, and, at the end of May of the following year, I met with it in similar spots in the laurel-district above Taganana

18 *Dromius elliptipennis*, n sp

*D* nitidus, capite piceo, latiusculo, oculis magnis, prominentibus, prothorace rufo-testaceo, subquadrato postice angustiore, ad angulos posticos late explanato, elytris ellipticis, ad latera rotundatis, testaceis, pone scutellum necnon per suturam obscure sed in fasciâ communi mediâ maximâ dentatâ distincte nigro-fuscis, antennis, palpis pedibusque testaceis, tarsis posticis longiusculis — Long corp ln  $1\frac{1}{2}-1\frac{3}{4}$

*Habitat* in sylvaticis excelsis Teneriffæ, Gomeiæ et Hierro, rarissimus

Until lately I had regarded this *Dromius* as a “var  $\beta$ ” (peculiar to the sylvan regions) of the *D sigma*, but the opinion (recently) of Dr Schaum that it is certainly distinct has induced me to examine it with greater care, and I now believe with him, that it cannot be referred to that species It may be known readily from the *sigma*

by its rather wider head and prothorax (the former of which has the eyes a little more prominent, whilst the latter is more broadly margined towards the basal angles), by its rounder or more elliptical elytra (which have their zigzag fascia very much deeper or more developed, and an evident, though never very conspicuous, cloud immediately behind the scutellum), and by its posterior feet being a trifle longer.

The *D. elliptipennis* appears to be extremely rare, and confined (so far as observed hitherto) to the damp sylvan regions of Teneriffe, Gomera, and Hierro,—in the former of which I captured it in the laurel-woods above Taganana, and in the latter at El Golfo (on the western side of the island). Its detection in Gomera is due to the recent researches of Dr. Crotch, who obtained it on the mountains above Hermigua.

### 19 *Dromius sigma*

*D. angustulus*, nitidiusculus, capite nigro-piceo vel piceo, prothorace elytrisq. testaceis, his subparallelis, suturâ fasciâque media dentatâ nigro-fuscis, antennis, palpis pedibusq. pallido-testaceis. *Vai. β* Capite prothoraceoque (rufo-brunneo) angustioribus, illo oblongo oculus paulo minus prominentibus. [*In excelsioribus* Teneriffæ]—Long. corp. lin.  $1\frac{1}{2}$ —vix  $1\frac{2}{3}$ .

*Carabus sigma*, Rossi, *Fna. Etrus.* 1: 226 (1790)

*Dromius sigma*, Woll., *Ins. Mad.* 5 (1854)

———, *Id.*, *Cat. Mad. Col.* 3 (1857)

———, Schaum, *Nat. der Ins. Deutsch.* 1: 273 (1860)

*Habitat* Canariam et Teneriffam, sub lapidibus, rarior, fere ad 9000' s. m. ascendens.

The European *D. sigma*, which occurs sparingly in the Madeiran Group, is decidedly rare in these islands, where however it is widely spread at intermediate and lofty altitudes. I have taken it in the region of El Monte in Grand Canary, and on the exposed mountain-slopes above the plain of Laguna in Teneriffe, as well as on the elevated Cumbre adjoining the Cañadas (nearly 9000 feet above the sea)—where the specimens (*vai. β*) have their head and prothorax, apparently, a little narrower, and their eyes somewhat less prominent. In Teneriffe it was found, also, by Dr. Crotch.

### 20 *Dromius incertus*, n. sp.

*D. subnitidus*, capite sat magno, nigro-piceo, prothorace piceo (vel rufo-piceo), subquadrato postice paulo angustiore, sat convexo, in medio profunde canaliculato, elytris substriatis, fusco-piceis, ver-

sus basin neonon ad apicem ipsum vix dilutionibus, antennis, palpis pedibusque subrobustis, testaceis—Long corp lin  $1\frac{1}{2}$ – $1\frac{2}{3}$

*Habitat* Lanzarotam borealem, d 9 Mart AD 1859 duo specimina collegi

The present *Dromius* is nearly allied to the European *D. nigriventris*, Thom (*fasciatus*, Dej), from which indeed Dr Schaum, to whom I forwarded a single specimen for examination, professed himself scarcely able (except in colour) to detect a satisfactory difference. But, after a most careful comparison of two examples which I captured in the island of Lanzarote with an English series of the *D. nigriventris*, I am quite satisfied that they cannot be specifically identical with the latter. Thus, they are not only altogether a little larger, wider, and more robust than the *nigriventris*, but the head and prothorax are *very perceptibly* larger (the latter, also, being more convex), the legs are thicker, and the colour of the elytra is almost uniformly of a dark piceous-brown,—there being only the faintest possible trace of a more diluted portion towards the base and at the extreme hinder margin. My two examples were taken amongst dry earth and rubbish on some rocks at Yé, in the north of Lanzarote, whilst encamped there, with the Rev R T Lowe, on the 9th of March 1859

## 21 *Dromius pervenustus*, n sp

*D. nitidus*, capite nigro-piceo (vel piceo), prothorace rufo-testaceo, brevissimo, elytris leviter punctulato-striatis, testaceis, fasciâ mediâ maximâ transversâ (haud dentata) neonon interdum suturâ nigris, antennis palpisque testaceis, pedibus pallido-testaceis—Long corp lin 1–vix  $1\frac{1}{3}$

*Habitat* in Teneriffa, Gomera et Palma, rarissimus

In general colouring this beautiful little *Dromius* is very similar to the *D. sigma*, nevertheless its comparatively minute size and exceedingly short prothorax, in conjunction with its more oblong and distinctly striated elytra, with their relatively larger, darker, and less dentate fascia, will at once separate it from that insect. It is apparently one of the rarest of the Canarian Coleoptera,—four out of the only five specimens which I have myself taken having been captured at the base of perpendicular rocks high up in the Barranco da Agua of Palma, and the remaining *one* in the dry cinderly region immediately above the Puerto Orotava of Teneriffe. A single example was obtained also in Gomera, by Dr Crotch

Genus 11 **BLECHRUS.**Motschulsky, *Bull de Mosc* iii 219 (1847)22 **Blechrus glabratus**Lebia glabrata (Meg) *Dufst, Fna Austri* ii 248 (1812)Diomus glabratus, *Bulle, in Webb et Berth (Col)* 55 (1838)——— *negrita, Woll, Ins Mad* 9 (1854)——— *glabratus, Id, Cat Mad Col* 4 (1857)Blechnus glabratus, *Schaum, Nat der Ins Deutsch* i 275 (1860)*Habitat* Teneriffam, rarior, in sylvis ad Agua Garcia et Taganana captus

Amongst the few specimens of the *B maurus* which I have taken at the Canaries, I find one which must certainly be referred to the nearly allied species *glabratus*. It was captured in Teneriffe,—at the Agua Garcia

23 **Blechrus maurus**Diomus maurus, *Sturm, Deutsch Fna*, vii 55 t 171 f D (1827)——— *glabratus, Woll, Ins Mad* 9 (1854)——— *maurus, Id, Cat Mad Col* 5 (1857)Blechnus maurus, *Schaum, Nat der Ins Deutsch* i 276 (1860)*Habitat* in Canaria, Teneriffa et Palma, sub lapidibus, passim

The common European *B maurus*, although rather abundant at Madeira, appears to be somewhat rare, or at all events very local, in these islands. I have taken it in Grand Canary, at Laguna, the Agua Garcia, Souzal, and Orotava, in Teneriffe, and in Palma, and it was captured in Teneriffe by Dr Crotch

24 **Blechrus plagiatus.**Lebia plagiata (Meg), *Dufst, Fna Austri* ii 249 (1812)Diomus plagiatus, *Sturm, Deutsch Fna*, vii 49 t 170 f D (1827)———, *Woll, Cat Mad Col* 5 (1857)Blechnus plagiatus, *Schaum, Nat der Ins Deutsch* i 277 (1860)

*Habitat* in Lanzarota, Fuerteventura, Canaria, Teneriffa et Gomera, hinc inde haud infrequens

The *B plagiatus* (which is of the greatest rarity in the Madeiran Group) would seem to be more common at the Canaries than the preceding species: nevertheless it is undoubtedly scarce, though very widely distributed over the archipelago. I have taken it in Lanzarote, Fuerteventura, (at San Mateo of) Grand Canary and (at Souzal and the Agua Garcia of) Teneriffe, and it was captured by Dr Crotch, at Hermigua, in Gomera. All my specimens from Lanzarote (ten in number) belong to a dark variety of the insect in which the testaceous elytral dash is obsolete—or, at any rate, so completely suf-

fused as merely to impart a just perceptibly paler tint to the disk of the elytra and at first sight, therefore, they might be taken for the *B maurus*, nevertheless their slightly larger size and somewhat longer antennæ, in conjunction with their less shining surface and less blackened tibiae and feet (the latter of which have their tarsal claws almost simple internally), prevent their being confounded with that species. I should add, however, that two examples which were taken in the same island (Lanzarote) by John Gray, Esq., have their discal patches well developed

## Genus 12 METABLETUS

Schm.-Gobel, *Ent Zeit S* 390 (1846)

### 25 *Metabletus patruelis*

*Diomus patruelis*, Chaud., *Enum. des Canab. de Can.* 60 (1846)

—— exclamationis, Menet., *Ins. nec p. Lehm.* 1 G f 4 (1849)

—— arenicolus, Woll., *Ins. Mad.* 6 (1854)

—— arenicola *Id.*, *Cat. Mad. Col.* 4 (1857)

—— obscuriguttatus, Hart. [nec Duft.], *Geolog. Verh. Lanz. und Fuert.* 141

*Habitat* Lanzarotam et Fuerteventuram, præsertim in arenosis, vulgaris

The *M. patruelis* (which is common in Porto Santo, and which occurs, though very rarely, in Madeira likewise) abounds throughout Lanzarote and Fuerteventura—the two eastern islands of the Canarian archipelago, but I have not yet observed it in any other portions of the Group. It is found more especially in the driest regions, and delights in sandy and calcareous spots. It was taken, also, in Lanzarote by Mr. Gray, and in Fuerteventura by M. Hartung, the latter of whom wrongly identified it (as I can vouch from the possession of one of his specimens) with the *M. obscuriguttatus*, Duft.

### 26 *Metabletus inæqualis*.

*M. æneus*, distincte alutaceus, sat nitidus, prothorace cordato, elytris plus minus inæqualibus, distincte striatis, singulo foveis duabus magnis notato, antennis femoribusque nigro-piceis, illis ad basim, tibus tarsisque plus minus piceo-fuscis.—Long. corp. lin.  $1\frac{1}{2}$ – $1\frac{2}{3}$

*Metabletus inæqualis*, Woll., *Ann. Nat. Hist.* (3rd series) vi 214 (1863)

*Habitat* in Canaria, Teneriffa, Gomera et Palma, præsertim in sylvaticis, sat frequens

The present species and the following one are very closely allied, but I believe that they are truly distinct, and such also was the opinion of Dr. Schaum, to whom I sent them for examination. They

belong to the same type as the European *M foveola*, and are still more nearly akin to the *M foveolatus*, Dej (*cupreus*, Waltl), found in the south of Spain and at Tangiers, and which I have myself taken in the sandy district at Mogadore, on the west coast of Morocco. Nevertheless from the latter they may, both of them, be immediately known by their entirely wanting the pale humeral patch which is always more or less evident in that insect. Touching their differences *inter se*, Dr Schaum remarks "The species from Palma and Teneriffe [*i.e. inæqualis*] I consider certainly new, the one from Lanzarote [*lancerotensis*] seems to me to be a second species, and no local state of the other. The Palman specimens not only have more uneven, and more distinctly striated, elytra, but also larger foveæ both on the disk and in the *lateral* series, whilst the Lanzarotan ones are more shining and almost free from striæ. From *foveola* the Palman species is distinguished by its uneven elytra and large foveæ (both discal and at the sides) the Lanzarotan species, on the other hand, has the small foveæ of *foveola*, but its elytra are almost smooth and brilliant (whereas in *foveola* they are opaque and finely striated)."

I have observed the *M inæqualis* hitherto only in the islands of Grand Canary, Teneriffe, and Palma, but it has recently been captured by Dr Crotch in Gomera also. The Palman examples have perhaps, on the whole, the distinctive characters of the species best expressed, their elytra being always exceedingly uneven and their discal impressions very large. Those from Teneriffe can scarcely be regarded as in reality less typical, though occasionally they may appear just perceptibly smoother. But the only three which I have as yet captured in Grand Canary (during my sojourn at El Monte, in March 1858), although quite as conspicuously striated as those from Teneriffe and Palma, have then foveæ less developed. It is eminently a sylvan insect, the few specimens which I have observed in comparatively open spots being probably the remains of a fauna which has more or less died-out since the timber has been destroyed. In Palma it abounds in most of the wooded ravines, such as the Barranco da Agua, the Barranco de Galga, &c, whilst in Teneriffe I have captured it above Taganana, at Las Mercedes, La Esperanza, the Agua Garcia, Souzal, the Agua Mansa, Yeod el Alto, and even on the Cumbre adjoining the Cañadas (upwards of 8000 feet above the sea).

## 27 *Metabletus lancerotensis*, n. sp.

*M æneus*, minute alutaceus, nitidus, prothorace subcordato, elytris subconvexis, obsolete substriatis, utrinque foveis duabus minoribus (sed sat magnis) notatis, antennis femoribusque nigro-piceis, illis

ad basin, tibus tarsisque plus minus piceo-fuscis —Long corp lin  $1\frac{1}{3}$ — $1\frac{2}{3}$

*Habitat* Lantarotam (piæsertim borealem), sub lapidibus, passim

As already implied, the somewhat more shining, and rather less coarsely alutaceous, surface of the present *Metabletus*, in conjunction with its slightly more convex, less uneven, and more obsoletely striated elytra (which have the foveæ, both of their disk and sides, distinctly smaller), will serve to separate it from the *M. inæqualis*. In habits, too, it is different from that species, being confined (so far as I have observed hitherto) to the dry and barren island of Lantarote,—where, during January of 1858 and March of the following year, I took it, not uncommonly, from beneath stones, in various localities, and where it was likewise captured by Mr Gray

### 28 *Metabletus brevipennis*, n sp

*M. inæqualis* similis sed vix minor, pallidior (i e magis fuscescens), opacior (i e paulo grossius alutaceus), fronte inter oculos magis depressâ, prothorace sensim quadratiore (i e postice vix minus angustato), elytris magis æqualibus, densius et multo levius (se levissime) striatis punctisque duobus discalibus multo minoribus notatis, brevioribus (apice magis truncatis), antennis pedibusque pallidioribus (rufo-brunneis) —Long corp lin  $1\frac{1}{2}$

*Habitat* Teneriffam, a W D Crotch tempore vernali A D 1862 deprehensus

The specimen from which the above diagnosis has been compiled was captured by Dr Crotch, during the spring of 1862, in Teneriffe, and although unwilling to erect a species on the evidence afforded by a single individual, yet its distinctive characters appear to be so well defined that I cannot but venture in the present instance to do so. Judging therefore from the unique example now before me, the *M. brevipennis* is slightly smaller, paler (or of a more brownish-piceous tint), and less shining (or more coarsely alutaceous) than the *inæqualis*, its forehead is rather flatter between the eyes, its prothorax is just perceptibly squarer (or less narrowed posteriorly), its elytra are much more *even*, more closely and very much more lightly striated, considerably shorter (or more truncated behind), and with the two discal punctures on each smaller, and its limbs are paler, being of a rufo-piceous or reddish-brown hue

### Genus 13 TARUS.

Clairville, *Ent. Helv.* n 94 (1806)

29 *Tarus discoideus*

*Cymindis discoidea*, Dej, *Icon* 1 78 t 8 f 5 (1829)

———, *Id*, *Spec Gén des Col* v 307 (1831)

——— *discoidea*, Brulle, in *Webb et Berth (Col)* 55 (1838)

———, *Hart*, *Geolog Verhältn Lanz und Fuert* 140 et 141

*Habitat* in Lanzarota et Fuerteventura, sub lapidibus, præsertim in arenosis, tempore hiurno et vernali vulgaris

I refer without hesitation the present superb *Tarus* to Dejean's *discoideus* (described from a single specimen, of uncertain *habitat*, which he obtained from the collection of Latreille), because it is the opinion of my friend Dr Schaum that such should certainly be the case, and because Dejean's diagnosis seems to tally sufficiently well with the long array of examples now before me. Almost the only particular, indeed, in which it does not quite accord with the Canarian insect is, that it speaks of the black patch at the base of the elytra as "presque triangulaire", whereas it is *invariably* (in 48 specimens which I have just examined) transverse-quadrate.

The *T. discoideus* abounds, beneath stones, during the winter and spring, in Lanzarote and Fuerteventura,—where it was taken by Mr Gray and myself in January 1858, and subsequently, by myself, during February, March and April of the following year. It has been likewise recorded in both of those islands by M Hartung. Hitherto I have not observed it in any other portion of the Group, nevertheless a pair has lately been communicated by the Barão do Castello de Paiva, professedly captured in Teneriffe, but as I feel that there may be some mistake about the *habitat*, I have thought it safer not to enter it as a Teneriffan species. It is far from unlikely, however, that it will be found to occur in the sandy region between Las Palmas and the Isleta, of Grand Canary.

30 *Tarus suturalis*.

*Cymindis suturalis*, Dej, *Spec Gén des Col* 1 206 (1825)

*Tarus suturalis*, Woll, *Ins Mad* 3 (1854)

———, *Id*, *Cat Mad Col* 2 (1857)

*Cymindis suturalis*, *Hart*, *Geolog Verhältn Lanz und Fuert* 140

*Habitat* in Lanzarota, Fuerteventura et Canaria, sub lapidibus in arenosis una cum specie præcedente degens

The *T. suturalis* (which occurs in three out of the five Madeiran islands, and which has lately been communicated by the Barão do Castello de Paiva even from the rocks of the Salvages) occurs, beneath stones (particularly in low sandy spots), in company with the last species, throughout Lanzarote and Fuerteventura, and I have like-

wise taken it between Las Palmas and Puerto da Luz, in Grand Canary. It is in Lanzarote, however, that it more especially abounds, where it was also captured by John Gray, Esq., and M. Hautung.

### 31 *Tarus marginellus*.

*T. elongatus*, nitidus, piceus, calvus, capite distincte sed parce punctulato, prothorace vix rufescentiore et (in disco saltem) vix punctulato, cordato, angulis ipsis posterioribus acute exstantibus, elytris oblongis, subdepressis, crenato-striatis, interstitiis minutissime et parce punctulatis, limbo anguste rufo-testaceo, antennis, palpis pedibusque rufo-testaceis—Long corp. lin  $3\frac{1}{2}$ —4

*Cymindis marginella*, Brullé, in *Webb et Berth* (Col) 55 (1838)

*Habitat* Lanzarotam borealem, sub lapidibus prope Salinas haud infrequens

The comparatively elongate outline and shining, unpubescent surface of the present *Tarus*, in conjunction with its almost unpunctured prothorax (which has its extreme hinder angles acutely prominent), and its rather depressed and finely crenate-striated elytra (the margin of which is narrowly rufo-testaceous, whilst the punctules of the interstices are most minute and remote), will at once distinguish it from the three following species. Hitherto I have observed it only in the north of the island of Lanzarote, where in January 1858 it was taken by Mr. Gray and myself (and subsequently, by myself, during March of the following year), from beneath stones, between the Salinas and the ascent of the lofty cliffs (known as the "Risco") which rise almost immediately behind them. I have compared it with Brullé's types, in the Paris collection, and can vouch therefore for its being correctly identified with his *C. marginella*.

### 32 *Tarus cinctus*.

*T. nitidus*, piceus, pilis mollibus cinctis longiusculis parce vestitus, capite prothoraceque profunde sed parce punctatis, hoc cordato, angulis ipsis posterioribus vix exstantibus, elytris ovalibus, subconvexis, levissime striatis, interstitiis profunde punctatis, limbo anguste rufo-testaceo, antennis palpisque rufo-testaceis, pedibus testaceis—Long corp. lin  $3-3\frac{1}{2}$

*Cymindis cincta*, Brullé, in *Webb et Berth* (Col) 55 (1838)

*Habitat* in montibus Canariæ Grandis, sub lapidibus, rarissimus

A remarkable *Tarus*, at once known by its curious sculpture,—the entire upper surface being impressed with large and deep punctures, whilst the elytral striæ are so light as to be almost obsolete. In common with the two following species, it is beset with very fine and

erect pile; nevertheless in the *T cinctus* the hairs are both longer and fewer than is the case in either the *amictus* or *zargoides*. And it is further distinguished by its elytra (which are narrowly edged with rufo-testaceous, as in the *T marginellus*) being somewhat convex, and by its extreme hinder prothoracic angles being almost rounded-off. It is apparently very rare, the only spot in which I have hitherto observed it being, beneath the fig-trees, in the lofty Pinal above San Bartolomé (in the district of Tajarana) of Grand Canary, during April 1858,—where, moreover, I obtained but eight examples. I can answer for its identity with Brullé's *C cincta*, having compared it with the types in Paris.

### 33 *Tarus amictus*, n. sp.

*T* subopacus, fusco-piceus, pilis mollibus erectis breviusculis dense vestitus, capite prothoraceque dense punctulatis, hoc latiusculo, cordato, angulis ipsis posticis paulo exstantibus, elytris subquadrato-ovalibus, striatis, interstitiis dense punctulatis, limbo vix fuscescentiore, antennis palpisque rufo-testaceis, pedibus testaceis.—Long corp. lin. 3.

*Habitat* in montibus Canariæ Grandis, ad Osorio (supra oppidum Teror) d. 23 Ap. A.D. 1858, sub lapidibus, deprehensus.

The comparatively opaque and very densely (though not deeply) punctulated surface of this distinct *Tarus*, combined with its rather broad prothorax and more quadrate elytra (the edges of which are but obscurely dilated, or of a more fuscescent hue, whilst their stræ are rather deep but simple), will at once serve to characterize it. Its clothing, also, is somewhat peculiar,—the hairs, although quite as fine and as erect, being both shorter and more dense than those of the *T cinctus*. The only two specimens which I have seen were captured by myself, beneath stones, at Osorio, in Grand Canary, on the 23rd of April 1858.

### 34 *Tarus zargoides*

*T* subnitidus, fusco-piceus, pilis mollibus erectis brevissimis sat dense vestitus, capite prothoraceque dense et profunde scabroso-punctatis, hoc cordato, angulis ipsis posticis paulo exstantibus, elytris ovalibus, subconvexis et undulato-inæqualibus, profunde (sed subirregulariter) punctato-striatis, interstitiis minute punctulatis, limbo vix rufescentiore, antennis palpisque testaceis, pedibus pallido-testaceis.—Long corp. lin.  $2\frac{1}{4}$ – $2\frac{3}{4}$ .

*Tarus zargoides*, *Woll, Ann. Nat. Hist.* (3rd series) xi. 214 (1863).

*Habitat* in sylvaticis montosis Teneriffæ, sub lapidibus, rarissimus. The somewhat dull and remarkably uneven surface of this curious

little *Tarus* (the elytral portion of which appears almost *undulated*), in conjunction with its densely and subrugosely sculptured head and prothorax, and the rather evident punctures of its (often interrupted) striæ, will readily distinguish it. Its legs are of a slightly paler hue than those of the three preceding species, the fine, erect pubescence with which it is clothed is *very* short, and its elytra are but obscurely dilated, or *subrufescent*, towards the edges and base. It is certainly rare, and appears to be peculiar to the sylvan regions of Teneriffe, at intermediate and rather lofty elevations. I have taken it in the woods above Taganana and at Las Mercedes, as also at the Agua Garcia and the Agua Mansa. Its general outline and uneven surface are strongly suggestive of a minute *Zangus*, from which fact I have borrowed its trivial name, and, according to Dr Schaum, it is nearer, in affinity, to the *T cordatus*, Rambur, than to any other species hitherto described.

#### Genus 14 MASOREUS.

(Ziegler) Dej, *Spec Gén des Col* iii 538 (1828)

#### 35 *Masoreus nobilis*, n sp

*M* magnus, piccus, capite prothoraceque nitidissimis, vix (etiam oculo valde armato) alutaceis, hoc leviter canaliculato, elytris alutaceis, sat profunde crenato-striatis, fere concoloribus (ad humeros vix rufescentioribus), antennis, palpis pedibusque rufo-piceis, unguiculis fere simplicibus.—Long corp lin  $2\frac{2}{3}$ –3 $\frac{1}{4}$

*Habitat* in Fuerteventura, ad Olvam d 31 Mart A D 1859 captus

The comparatively large size of this gigantic *Masoreus*, in conjunction with its almost uniformly piceous (or rufo-piceous) hue, the unalutaceous surface of its head and prothorax, its somewhat deeply crenate-striated elytra, and its nearly simple claws, will at once characterize it. The only three specimens which I have seen were captured by myself, from beneath stones, in the flat ground immediately to the south of Oliva, in Fuerteventura, on the 31st of March 1859.

#### 36 *Masoreus arenicola*.

*M* nigro-piccus, distincte (oculo armato) alutaceus, prothorace transverso, subconvexo, postice in medio plus minus conspicue transversim impresso sed vix rugato, canaliculâ centrali haud profundâ necnon antice et postice plus minus subobsoletâ, elytris leviter subcrenato-striatis, ad basin plus minus distincte rufescentioribus, antennis, palpis pedibusque piceo-testaceis, unguiculis leviter denticulatis.—Long corp lin 2–2 $\frac{1}{4}$

*Masoreus arenicola*, Woll, *Ann Nat Hist* (3rd series) xi 214 (1863).

*Habitat* in arenosis maritimis (plus minus salinis) Lanzarotæ et Fuerteventuræ, tempore hiberno et vernali hinc inde vulgaris

The present *Masoreus* and the following one are closely akin to the European *M Wetterhali*, but, apart from other characters shortly to be noticed, they *both* differ from that species in having their surface (when viewed beneath the microscope) distinctly alutaceous and their scutellum unchanneled posteriorly (or if at all, *most obsoletely so*). In general colouring, as well as in its maritime habits, the *M arenicola* approaches more nearly to its European ally than the *alticola* does, nevertheless (on account of its minutely alutaceous sculpture) it is less highly polished than that insect, its prothorax is rather more transverse, more impressed in the centre behind, convexer on the disk and with its channel lighter, its elytra (which have their striæ considerably finer) are more narrowly and less brightly rufescent at their base, whilst its claws (when seen under a high magnifying power) are much less strongly denticulated.

From the following species the *M arenicola* differs in its rather more alutaceous surface, in its prothorax being a trifle wider and more transverse, convexer on the disk but more impressed in the centre behind, and with its channel lighter and more or less obsolete at the base and apex, in its elytra being just perceptibly straighter at the sides, usually more brightly rufescent at the base, and with their striæ perhaps even still more faintly crenulated, and in its legs being a shade darker, with their two hinder femora perhaps just perceptibly longer. Its claws also are less coarsely denticulated, though, the teeth being in every species of course extremely small, this is a character not very easy of observation, and one, I am well aware, in which it is possible to be deceived. In habits, however, the two insects are abundantly distinct, for whilst the *arenicola* frequents the low sandy shores of Lanzarote and Fuerteventura, occurring in more or less saline places and even beneath Algæ, the *alticola*, on the other hand, is found at a great elevation within the damp wooded districts of Teneriffe, where it ascends to more than 8000 feet above the sea.

The *M arenicola* is likewise very nearly allied to the *ægyptiacus* (a type of which, for comparison, has been furnished by Dr Schaum), but in that insect the striæ are quite uncrenulated, and the claws are almost simple. Its prothorax too is not exactly the same.

I have taken the present *Masoreus* abundantly in Lanzarote and Fuerteventura (in the latter of which islands it was captured also by Mr Gray), during the winter and spring. It occurs beneath stones and marine rejectamenta in sandy spots, usually at a short distance behind the sea-beach, though sometimes actually upon it,—in both

of which situations I have observed it plentifully at the Salinas in the extreme north of Lanzarote, as also around Arrecife, and at Ber-rugo in the extreme south, whilst, in Fuerteventura, it is common in sandy places near Puerto de Cabras

### 37 *Masoreus alticola*, n. sp.

*M* nigro-piceus, sat distincte (oculo armato) alutaceus, prothorace paulo minus transverso, postice in medio distinctius longitudinaliter stiguloso sed haud impresso, canaliculâ centrali profunda integrâ, elytris subrotundatis, leviter crenato-striatis, ad basin plus minus indistincte rufescentioribus, antennis, palpis pedibusque testaceis, femoribus posticis breviusculis, unguiculis conspicue denticulatis —Long corp lin 2-2 $\frac{1}{4}$

*Habitat* in elevatis humidis Teneriffæ, præsertim sylvaticis, usque ad 8000' s m ascendens

Were it not for its completely opposite habits, I should certainly have confounded the present *Masoreus* with the last one, nevertheless, warned by the very decided differences in their modes of life, I have lately overhauled the two insects most carefully, and feel perfectly satisfied that, however near they may approach each other at first sight, they are in reality distinct\*. The *M alticola* is, on the average, perhaps a trifle smaller and less alutaceous than its ally, its prothorax is rather narrower, or less transverse, not so convex on its disk, less impressed in the centre behind (where moreover the longitudinal *rugæ* are much more conspicuous), and also more deeply channeled (the channel extending from the extreme base to the apex), its elytra are just perceptibly rounder at the sides, with their striæ perhaps more evidently crenulated, and usually a little less rufescent towards their base, its hinder femora are somewhat shorter, its legs paler, and its claws, unless I am mistaken, are rather more powerfully denticulated. In this last respect, indeed, it is coincident with the European *M Wetterhalli*, but, apart from other differences, its alutaceous and less shining surface, in conjunction with its obscurer colour, unchanneled scutellum, and totally opposite habits, will at once separate it from that insect

The *M alticola* appears to be peculiar to the lofty districts of Teneriffe, where it occurs in damp sylvan spots in the vicinity of small streams and wet rocks. I have taken it sparingly on the mountains above the Agua Mansa, as also in the ravines of the Pinal

\* I am glad also to be able to state that, after examining them (recently) with great care, such was likewise the ultimate opinion of Dr. Schaum,—though (as in my own case) he was not able at first sight to appreciate their differences

above Yeod el Alto, and even from amongst the thickets of the Retamas on the Cumbie adjoining the Cañadas—more than 8000 feet above the sea

(Subfam VII CHLÆNIIDES)

Genus 15 **CHLÆNIUS**

Bonelli, *Observat Entom* 1 tab syn (1813)

38 **Chlænus spoliatus.**

*Carabus spoliatus*, Rossi, *Mont Ins* 1 79 (1792)

—— —, *Fab*, *Syst Eleu* 1 183 (1801)

*Chlænus spoliatus*, Dej, *Spec Gen des Col* n 312 (1826)

—— —, *Schaum*, *Deutsch Fna*, 1 329 (1860)

*Habitat* Canariam, Teneriffam et Gomeram, per margines aquarum in locis inferioribus, rarissimus

The European *C spoliatus* appears to be very rare at the Canaries, the only two spots in which I have myself observed it being near S<sup>t</sup> Cruz of Teneriffe (beneath stones at the edges of the small stream in the Baranco Santo), and along the margins of the little pools in the sandy waste at Maspalomas, in the extreme south of Grand Canary. A single specimen, however, was taken by Dr Crotch in Gomera

39 **Chlænus canariensis.**

*Chlænus canariensis* (Klug), *Dej*, *Spec Gén des Col* v 657 (1831)

—— —, *Brulle*, in *Webb et Berth* (*Col*) 57 pl n f 5 (1838)

*Habitat* Canariam et Teneriffam, in usdem locis ac præcedens sed multo magis frequens

The beautiful *C canariensis* I have taken hitherto only in the two same localities as the last species (than which it is far more abundant). It has, however, been communicated by the Barão do Castello de Paiva from the Baranco de San Domingo, near Laguna

(Subfam VIII LICINIDES)

Genus 16 **LICINUS**

Latreille, *Gen Crust et Ins* 1 199 (1806)

40 **Licinus Manriqueanus.**

*L ater*, nitidus, capite leviter punctato, prothorace transverse subquadrato (ad latera subrecto), in disco leviter et parce sed versus latera et basin dense et profunde punctato, elytris profunde punctato-striatis, interstitiis convexis, parce et profunde punctatis nec-

non punctulis minutissimis interspersis, antennis ferrugineis, ad basin, palpis tarsisque rufo-piceis—Long corp ln  $5\frac{1}{2}$ – $6\frac{1}{2}$

*Licinus* spec (agricolæ affinis), *Hartung, Geolog Verh. Lanz und Fuert* 140 et 141

— Manriqueanus, *Woll, Ann Nat Hist* (3rd series) ix 438 (1862)

*Habitat* Lanzarotam et Fuerteventuram, sub lapidibus, tempore hierno et vernali haud infrequens. Species valde distincta, indigena, et in honorem clariss Dom *Pedro Manrique de Lara y Cabrera*, ob gratias plurimas nobis in ins Fuerteventura amicissime oblatas, dicata

The present *Licinus* (which has nothing in common with the European *L. agricola*, as implied in M. Hartung's list) is about the size of the *L. brevicollis*, Dejean—from the north of Africa, Sicily, Malta, &c. It may, however, be known by its shining, unalutaceous surface, its subquadrate prothorax (which is less rounded at the sides than in the generality of the *Licini*), by its deeply punctate-striate elytra, the interstices of which are convex and studded with a double series of large and small punctures, and by its antennæ being brightly rufo-ferruginous towards their apex. It is tolerably common, beneath stones, in Lanzarote and Fuerteventura, during the winter and spring, in both of which islands it was taken by Mr Gray, myself, and M. Hartung. In the latter I observed it more particularly at Oliva, whilst visiting that comparatively fertile spot, in company with the Rev R. T. Lowe, at the end of March 1859, and I have great pleasure in dedicating it to our worthy host, Don Pedro Manrique de Lara y Cabrera, whose unbounded kindness and hospitality, during our entire sojourn in his island, I am glad to have an opportunity of recording.

### (Subfam IX BROSCIDES)

#### Genus 17 BROSCUS.

Panzer, *Index Ent* i 62 (1813).

#### 41. *Broscus glaber*

*B. ater*, capite prothoraceque nitidis, hoc cordato, ad basin leviter et parce punctato, ad latera ipsissima anguste marginato subcyanescente, elytris subnitidis, obsoletissime subpunctulato-striatis, ad latera ipsissima anguste marginatis subcyanescentibus, antennis fusco-piceis, articulo primo flavo-testaceo, pedibus elongatis, piceis—Long corp ln  $8\frac{1}{2}$ –9

*Feronia* (Percus) glabra, *Brullé, in Webb et Berth (Col)* 57 pl n f 4 (1838)

*Habitat* in Canaria Grandi, sub lapidibus in collibus aridis supra urbem Las Palmas, tempore vernali haud infrequens

The present insect, which is undoubtedly the *Feronia glabra* of Brullé (as I have satisfied myself by an examination of his original types, in Paris), appears, so far as I have observed hitherto, to be peculiar to Grand Canary, where, at the end of March 1858, I took it, not uncommonly, beneath stones, on the calcareous hills above Las Palmas, along the road to El Monte

#### 42. *Brosicus rutilans*.

*B. ater*, capite prothoraceoque nitidissimis, hâc angusto, cordato, ad basin profundius et densius punctato, ad latera ipsissima angustissime marginato subconcolore, elytris nitidis, obsoletissime subpunctulato-striatis, ad latera ipsissima angustissime marginatis subconcoloribus, antennis fusco-piceis, articulo primo testaceo-piceo, pedibus piceis—Long corp lin 7-8

*Brosicus rutilans*, Woll, *Ann Nat Hist* (3rd series) ix. 438 (1862)

*Habitat* in montibus excelsis Teneriffæ, usque ad 7000' s m. ascendens

The rather smaller size, narrower outline, and more shining surface of this very distinct *Brosicus*, in conjunction with the more punctured base of its prothorax, and its altogether narrower and less cyanous margin, will at once distinguish it from the last species. Its limbs, too, are somewhat shorter, and the basal joint of its antennæ is less pale. In its habits it is very different from the *B. glaber*,—residing in the higher regions of Teneriffe, above the upper limits of the sylvan districts. In such situations I obtained it, rather abundantly, during May of 1859, on the mountain-ridges above the Agua Mansa, adjoining the Cumbre,—upwards of 7000 feet above the sea

### (Subfam X PTEROSTICHIDES)

#### Genus 18 *POGONUS*.

(Ziegler) Dej, *Spec Gén des Col* iii 6 (1828)

#### 43 *Pogonus salsipotens*, n sp

*P. æneo-viridis*; prothorace subquadrato, antice rotundato-amphato, postice leviter contracto, ad basin profunde punctato, elytris oblongis, profunde punctato-striatis, stinis externis obsoletis

α Paulo major, obscurior, antennis rufo-piceis, pedibus rufo-testaceis

β Paulo minor, viridior, antennis rufo-testaceis, pedibus testaceis—Long corp lin 2-2½

*Habitat* in locis salinis Lanzarotæ, hinc inde sat vulgaris

About the size of (or perhaps a trifle larger than) the common

European *P. chalcus*, but with its prothorax a little broader anteriorly and more coarsely punctured at the base, and with its elytra rather more parallel at the sides and much more deeply punctate-striate. Its limbs, too, are just perceptibly longer and more robust. I have hitherto observed it only in salt places in Lanzarote,—namely, at the Salinas (or salt-pans) in the extreme north (where it was also captured by Mr Gray), and along the edges of the curious sea-water lake known as “Januvio,” towards the south-west of the island. In the former of these localities the specimens are, on the average, rather larger and of a less metallic green than those from the latter, and with their limbs of a slightly duller hue, but they present no other differences, that I can detect.

#### 44 *Pogonus* Gray

*P. angustus*, pallidus, capite prothoraceoque rufo-testaceis, hoc elongato postice paulo angustiore, ad basin punctato, elytris testaceis, parallelo-oblongis, subpunctato-striatis, antennis rufo-testaceis, pedibus testaceis.—Long corp. lin  $1\frac{2}{3}$ —2

*Pogonus* Gray, *Woll., Ann. Nat. Hist.* (3rd series) ix 438 (1862)

*Habitat* Lanzarotam, in eodem locis ac præcedens sed multo rarior

Species a Dom<sup>o</sup> Gray ad “Salinas,” mense Januario A.D. 1858, primo detecta, cujus in honorem nomen triviale proposui

The small size, extremely narrow outline, and pallid hue of this interesting little *Pogonus*, in conjunction with its elongate prothorax and very parallel elytra, will (apart from less important characters) at once distinguish it. It is much the colour of the *P. testaceus* of Mediterranean latitudes, though in shape more resembling the *filiformis* from Sardinia. It was first detected by John Gray, Esq., who captured a single specimen at the Salinas, in the extreme north of Lanzarote, during our visit there in January 1858, and it was not until the following year that I succeeded (on the 26th of March) in finding it myself,—when I obtained a considerable number along the edges of the salt lake of Januvio, towards the south-west of the island. I have great pleasure in naming it after its discoverer, to whose extensive material and accurate observations I am indebted for so much valuable assistance in compiling the present volume.

#### Genus 19 *SPHODRUS*

Clanville, *Ent. Helv.* ii 86 (1806)

45 *Sphodrus leucophthalmus*

*Canabus leucophthalmus*, *Linn*, *Fna Succ* 784 (1761)

*Sphodrus planus*, *Clav*, *Ent Helv* 11 86 (1806)

— — —, *Dej*, *Spec Gen des Col* 11 88 (1828)

— *leucophthalmus*, *Schaum*, *Nat der Ins Deutsch* 1 381 (1860)

*Habitat* Lanzarotam, 18188, foisan ex Europâ introductus

The common European *S leucophthalmus* occurs in Lanzarote, though very sparingly, where it was captured by Mr Gray and myself, in the vicinity of Arrecife, during January 1858.

## Genus 20 PRISTONYCHUS.

*Dejean*, *Spec Gen des Col* 11 43 (1828)

46 *Pristonychus alternans*

*Pristonychus alternans*, *Dej*, *Spec Gen des Col* 11 61 (1828)

*Sphodrus alternans*, *Brullé*, in *Webb et Berth (Col)* pl 11 f 8 (1838)

*Habitat* Teneriffam, præsertim in montibus, sed haud frequens

The large and distinct *P alternans*, so remarkable for its flattened, opaque, alutaceous elytra (which are acuminate at their apex, and have their alternate interstices more or less impressed with large and deep punctures), is widely scattered, though sparingly, throughout the intermediate and higher elevations of Teneriffe. I have taken it on the ascent of the mountains immediately behind St<sup>a</sup> Cruz, at an elevation of scarcely more than about 600 or 700 feet, as also on the lofty Cumbre adjoining the Cañadas, at an altitude of at least 7000 feet above the sea. It has also been sent to me from Teneriffe by the Barão do Castello de Parva.

47 *Pristonychus complanatus*

*Pristonychus complanatus*, *Dej*, *Spec Gen des Col* 11 58 (1828)

*Sphodrus complanatus*, *Brullé*, in *Webb et Berth (Col)* 56 (1838)

*Pristonychus alatus*, *Woll*, *Ins Mad* 27 (1854)

— — —, *Id*, *Cat Mad Col* 11 (1857)

*Habitat* in Lanzarota, Teneriffa et Palma, hinc inde sub lapidibus necnon in cavernis tunc latitans

Although nowhere abundant, the *P complanatus* of Mediterranean latitudes is widely distributed over the Canarian archipelago, and will probably be found to be universal. At present, however, I have only observed it in Lanzarote, Teneriffe, and Palma (in the second of which it was also taken by Dr Clotch and the Barão do Castello de Parva). It occurs in Madeira and Porto Santo, and is recorded by M Morelet at the Azores, and it was found by Mr Bewicke even at St Helena so that it would appear to be very general throughout the Atlantic islands.

48. *Pristonychus picescens*, n. sp.

*P. angustulus*, piceus, depressus, capite prothoraceque nitidis, hâc elongato-subquadrato postice paulo angustiore, ad latera late reflexo, basi (præsertim versus angulos posticos) sat profunde punctato, elytris complanatis, alutaceis, subopacis, punctatulo-striatis, antennis pedibusque elongatis, lacte rufo-piceis, tibus (certe in fœminâ, forsan in utroque sexu) rectis, unguiculis fere simplicibus.—Long corp. ln 6

*Habitat* in ins. Hierro, mense Februario a. d. 1858 specimen unicum (sc. fœmineum) inveni

The only example which I have seen of this fine *Pristonychus* was captured by myself, beneath a stone, in the district of El Golfo, on the western side of Hierro, during our visit to that island in February 1858. It is narrower, flatter, and more piceous than the *P. complanatus*, its prothorax is relatively longer and more narrowed behind, more margined and recurved at the sides, and more punctured at the base, its elytra are more coarsely alutaceous and depressed, and its limbs are considerably paler and longer. Its claws, also, are nearly simple (appearing indeed quite so when viewed from above),—there being only the faintest trace possible of basal crenulations when seen from beneath.

Genus 21. **CALATHUS.**

Bonelli, *Observat. Ent.* 1 tab. syn. (1809)

Having taken some pains, in 1862, to monograph the *Calathi* of these islands, I must refer to my paper (which was published in the 'Ann. of Nat. Hist.' for May of that year) for the diagnoses of the several species, but since the diagnostic *observations* which it will be desirable here to add can scarcely be compressed into a smaller space than that which I there devoted to them, I think perhaps that I shall hardly do better than extract them almost *verbatim*. One addition, however, (the *C. cognatus*) has subsequently been made,—the result of Dr. Crotch's indefatigable researches, during the spring of 1862, in Gomera.

§ I. *Tibice in utroque sexu (omnino vel fere) simplices*

a. *Corpus magnum, prothorace postice plus minus angustiore, punctis elytrorum discalibus obsoletis*

49. *Calathus sphodroides*.

*Calathus sphodroides*, Woll., loc. cit. 342 (1862)

*Habitat* in sylvaticis editoribus Teneriffæ, rarissimus

The present species and the following one are remarkable amongst

the Canarian *Calathu* for their immense size (the *C ciliatus*, of the second Section, being the only one which equals them in bulk), for their prothoraces being narrower behind than in front (a structure of rare occurrence in this genus), and for the discal punctures of their elytra being obsolete. *Inter se* they may be known by the *C sphodroides* being darker than its ally, by the different shape of its (more basally-punctured) prothorax, and by its elytra being somewhat less flattened, rounder posteriorly, and not so acuminate at their apex. It is extremely rare, and confined to the sylvan regions of Teneriffe, at intermediate and rather lofty elevations,—the only specimens (seven in number) which I have seen having been captured by myself, from beneath loose rotting bark, at the Agua Garcia and in the woods above Taganana.

### 50 *Calathus acuminatus*.

*Calathus acuminatus*, Woll., loc. cit. 342 (1862)

*Habitat* Teneriffam sylvaticam, in eodem locis ac præcedens

The *C acuminatus* may be known from the last species by its more piceous or rufescent hue, by its prothorax being less conspicuously narrowed behind, with the sides more elevated and more regularly rounded in the middle (instead of *before* the middle, as in that insect), less punctured towards the base, and with its anterior angles more projected and acute, by its elytra being flatter, and more acuminate at their apex, and by its limbs being of a uniformly paler tint. It occurs in precisely the same spots as the *C sphodroides*, being peculiar (so far as I have observed hitherto) to the wooded districts of Teneriffe. Although rare, it is not quite so scarce as its ally. I have taken it in the forest-region of the Agua Mansa, above Ycod el Alto, and at the sides of the Vueltas leading down from the Cumbre to Taganana.

- b *Corpus minoris magnitudinis, prothorace postice (ut in Calathus typicus) plus minus latiore, punctis elytrorum discalibus plus minus distinctis*

### 51. *Calathus rufo-castaneus*

*Calathus rufo-castaneus*, Woll., loc. cit. 343 (1862)

*Habitat* in elevatis humidis sylvaticis Teneriffæ, rarissimus

The pale rufo-castaneous hue of this distinct and rather large *Calathus*, in conjunction with its highly polished head and prothorax (the latter of which is a good deal recurved, and somewhat pellucid, towards the edges), the minute size of the discal punctures of its

elytra, and its testaceous limbs, will at once separate it from the other species here enumerated. Only nine examples have come hitherto beneath my notice, and it may be considered, therefore, as decidedly rare. They were all taken in the wooded region above the Agua Mansa of Teneriffe, so that the species is probably peculiar to the upper portion of the sylvan districts.

## 52 *Calathus carinatus*.

*Calathus carinatus* <sup>?</sup>, Brulle, in Webb et Berth (Col.) 55 (1838)

———, Woll, loc. cit. 343 (1862)

*Habitat* Teneriffam, in locis similibus ac præcedens, sed parum vulgaris

A most remarkable species, at once known by its narrow, elongate-quadrate prothorax and by its extremely depressed, opaque and elliptical elytra, which have the basal line of each (from either shoulder to the scutellum) very deeply curved, and their discal punctures (of which there are usually from five to nine on the third, from about two to four on the fifth, and *occasionally* one or two on even the seventh interstice) exceedingly distinct. I have but little doubt that it is the *C. carinatus* of M. Brullé, for although I was not able, whilst in Paris, to obtain a sight of his *Calathus*, yet I think there is just sufficient in the description (so called) to render it probable that this is the insect to which he referred,—though his total silence on all the salient peculiarities of the four Canarian species which he wished to indicate (one of which is no *Calathus* at all, but an *Argutor*) renders his diagnoses utterly worthless.

The *C. carinatus* is rather common throughout the sylvan regions of Teneriffe. I have taken it abundantly at the Agua Garcia, as also in the woods above Taganana and at Las Mercedes, in the last of which localities it was also found by the Barão do Castello de Paiva.

## 53 *Calathus advena*.

*Calathus advena*, Woll, loc. cit. 344 (1862)

*Habitat* Canariam Grandem, tempore vernali A.D. 1858 specimen unicum (sc. masculum) inveni

The present *Calathus* is the only one of which I had not an extensive series to compile my diagnosis from, the single specimen which I have seen being one which I captured in Grand Canary (I believe in the region of El Monte) during the spring of 1858. Fortunately, however, it happens to be a male, so that I can have no hesitation (from its simple unfringed tibiae) as to which of my Sections

it belongs to. It is remarkable for its basally wide (though *altogether* not very broad) prothorax, for its subopaque ovate elytra (which are a good deal expanded behind the middle, and have, apparently, but two punctures developed on their disk), for its fusco-piceous hue, and for its rather elongate, slender limbs. There is certainly no species here enumerated to which it could be referred.

#### 54 *Calathus abaxoides*

*Calathus abaxoides* ♀, *Brulle, in Webb et Benth (Col)* 56 (1838)  
 ———, *Woll, loc cit* 345 (1862)

*Habitat* in sylvaticis humidis Teneriffæ, sat frequens

I refer this insect to M. Brullé's *C. abaxoides* from the mere fact of the latter's specific name, there being no other Canarian *Calathus* which could be compared in outline to an *Abax*, but since he says that the *abaxoides* is much of the same form as his following species, the *C. angularis* (which is an *Argutor*, and no *Calathus* at all), and since he speaks of it as "cinq lignes de longueur," whilst it is only *four*, I cannot but feel doubtful, in the absence of even a single distinctive character in his diagnosis, whether it be correctly identified. It may readily be known by its small size, elliptical outline, and the almost *equally* shining surface of its prothorax and elytra, the former of which is broad posteriorly and almost unincurved at the sides (except slightly so towards the basal angles), whilst the latter are gradually somewhat narrowed behind, with their interstices slightly convex, and with their discal punctures (from three to five on the third interstice) pretty evident.

The *C. abaxoides* is rather abundant throughout the sylvan regions of Teneriffe, occurring in exactly the same places as the last species. I have observed it more particularly at the Agua Garcia, above Taganana, and at Las Mercedes. It has also been communicated by the Barão do Castello de Parva and Professor Heer of Zurich, the latter of whom obtained it from M. Hartung.

#### 55 *Calathus ascendens*

*Calathus ascendens*, *Woll, loc cit* 345 (1862)

*Habitat* sub lapidibus in montibus Teneriffæ, usque ad 8000' s. m. ascendens

The present *Calathus* (which I have observed only in Teneriffe) is essentially an inhabitant of the loftiest elevations, attaining its maximum at about 8000 feet above the sea, and but rarely descending into the sylvan districts. It may be known by its only slightly

shining surface, fusco-piceous hue, and rather large size, by its prothorax (which is a little rufescent at the edges, and not much recurved) being about equally narrowed before and behind, and by the discal punctures of its elytra being well developed and distinct I took it in profusion, during May of 1859, from beneath stones on the Cumbre adjoining the Cañadas, above Ycod el Alto (where it has subsequently been captured by Dr. Crotch), as also on the opposite Cumbre above the Agua Mansa. In both instances, however, I observed a few stray specimens at a rather lower altitude,—namely, almost at the Agua Mansa and Ycod el Alto themselves, but as even those spots could not be less than some 5000 feet in elevation, there can be no doubt that the *C. ascendens* must be regarded as an alpine species.

#### 56 *Calathus cognatus*, n. sp.

*C.* subconvexus, capite prothoraceoque nitidissimis, rufo-piceis, hinc subconico (postice multo latiore), ad latera subpallidiorie et paulo recurvo, elytris piceis, vix (certe in sexu masculino) obscurioribus, lineâ basali in utroque rectissimâ, profunde striatis, interstitiis convexis, tertio punctis 2 distinctis notato, antennis pedibusque rufo-testaceis.—Long. corp. lin. 5.

*Habitat* Gomeram, duo specimina in montibus supra Hermigua deprehendit W. D. Crotch.

The only two examples (both of them males) which I have seen of the present *Calathus* were taken by Dr. Crotch on the mountains above Hermigua, in Gomera, during the spring of 1862. In their general aspect and colouring, as well as in the excessive straightness of the basal rim of their elytra (extending from either shoulder to the scutellum), and the fact of their male tibiae not being fringed internally with more hairs than is usual in the ordinary *Calathus*, they are certainly more nearly related to the Teneriffan *C. rectus* than to any other of the species here enumerated. They are, however, larger and less depressed than that insect, their prothorax is much more conical (being relatively broader behind and narrower in front, and with its sides consequently more oblique, causing the basal angles to be less strictly right angles), their elytra are more shining (or less alutaceous), much more deeply striated, and with the interstices (down the third of which there appear to be but two impressed points) more convex, and their limbs are altogether more robust.

#### 57 *Calathus rectus*.

*Calathus fulvipes*?, Brulle [nec Lat.], in Webb et Berth. (Col.) 56 (1838)  
— *rectus*, Woll., loc. cit. 346 (1862).

*Habitat* in locis inferioribus et intermediis Teneriffæ, passim.

In their very shining head and prothorax, and duller (though scarcely opaque) and lightly striated elytra, as well as in their general hue and comparatively smaller size, the present *Calathus* and the following one have much in common. Nevertheless the *C. rectus* is the larger and flatter of the two, and has its limbs considerably longer, its head and prothorax also (the latter of which is a trifle more elongate and wider behind, and has its edges more evidently recurved) are more rufescent, and the basal line of its elytra (extending from either shoulder to the scutellum) is less arcuate,—being, in fact, almost perfectly straight. Whilst the following species occurs only (so far as observed hitherto) in Lanzarote, the *C. rectus* is scattered sparingly over the low and intermediate elevations of Teneriffe. I have taken it near Sta Cruz and Orotava (at the latter of which it was found likewise by Mr Gray), as also on the mountains above Taganana, and it has been communicated by the Barão do Castello de Paiva from Las Mercedes.

I have but little doubt, from its size and superficial aspect, that it is the insect referred by M. Buellé to the European *C. fulvipes*,—with which, however, it has nothing, in reality, except its generic characters, in common.

### 58 *Calathus simplicicollis*.

*Calathus simplicicollis*, Woll, loc cit 347 (1862)

*Habitat* Lanzarotam borealem, tempore hiberno et vernali sat frequens

As may be gathered from what has already been said, the present *Calathus* (which seems to be peculiar to Lanzarote) differs from the last one in being a little smaller, narrower, and more convex, of a slightly darker hue, and with its limbs considerably shorter. Its prothorax, also, is somewhat less conical, with the sides more narrowly rufescent and less recurved, and the basal line of its elytra (joining either shoulder with the scutellum) is more arcuate. It is about the size and general outline of the common European *C. melanocephalus*, nevertheless it differs from all the specimens and all the varieties of the latter which I have yet seen (including the *peltatus*, Kolen, the *ochropterus*, Duft, and the *alpinus*, Dej, for types of which I am indebted to Dr Schaum) in having its prothorax *totally free* from the slightest trace of the two basal foveæ which are always *more or less* expressed in that insect, as also a trifle wider posteriorly, and *perfectly unmargined* behind the hinder angles—which are, themselves, a little more sharply defined (or more strictly right an-

gles), its head, too, is altogether *thicker* and more developed, with the eyes less prominent, with the incassated edge of the clypeus (immediately behind the insertion of the antennæ) more rounded, and with the forehead more convex, and its colour (on which, however, I lay but little stress) is different, its head being somewhat redder (or less black), whilst its prothorax is not so red (or more infuscated). Its elytra, also, are perhaps a little more shining and less depressed. The only locality in which I have taken, hitherto, the *C. simplicicollis* is the extreme north of Lanzarote, where it is not uncommon in the rocky ground between the Salinas and the Risco

§ II *Tibæ posteriores maris intus plus minus dense fimbriatæ*

59 *Calathus ciliatus*

*Calathus ciliatus*, Woll., *loc. cit.* 348 (1862)

*Habitat* in montibus excelsis plus minus sylvaticis Teneriffæ, hinc inde sed parum rarus

The large size of the present *Calathus*\* and the following one will easily separate them from the other species of my second Section. *Inter se* they are at first sight a good deal allied, and before examining them closely, I had imagined they were but phases of one insect. A more accurate inspection, however, of *the sexes of both* has convinced me that they are probably distinct. The *C. ciliatus* is somewhat the more bulky of the two, being always broader than its ally, and on the average a little longer. And it may, additionally, be known by its prothorax being more especially wider and less conical, by the basal line of its elytra being much less deeply arcuate, causing the shoulders to be less projected, by the punctures of its third and fifth interstices being usually less numerous, by its elytra (which are a trifle brighter and with their intervals less flattened in the *male* sex) being more oblong, and by the four hinder tibæ in the male being fimbriated along a rather greater portion of their inner edge. It appears to occur principally in the upper part of the sylvan regions of Teneriffe, and, indeed, I have not yet observed it below an altitude of about 5000 feet. On the damp ledges and rocks above the Agua Mansa, to within a short distance of the Cumbre, I obtained it sparingly during May 1859.

\* In the National Collection at Paris I observed specimens of this insect under the name of "*C. complanatus*, Dej." That species, however, is confined to Madeira, and is totally distinct from the present one, which has more in common *primâ facie* with the Madenian *C. vividus*, Fab. In real fact, however, *both* of the Maderan species belong to a different type from these two Canarian ones,—having the hinder tibæ of their males simple.

60 *Calathus auctus*.

*Calathus auctus*, *Woll*, *loc cit* 349 (1862)

*Habitat* Teneriffam humidam excelsam, in locis similibus ac præcedens

As already implied, the rather smaller size and less widened outline of the present *Calathus* (the prothorax of which is especially narrower and more conical), in conjunction with its more elliptic elytra (which have their basal line more curved, and their shoulders consequently acuter or more porrect) and its more numerous discal punctures, will at once separate it from the last species. It differs also in its males having the elytra somewhat more opaque (with the interstices flatter), and the four hinder tibiæ fimbriated along a rather shorter portion of their inner edge. At the same time, I would add that I am not perfectly satisfied that it may not be an extreme state of that insect. The *C. auctus* is found in precisely similar spots as the *ciliatus*, occurring in damp localities at a high elevation on the mountains of Teneriffe. I took it, in company with that species, during May of 1859, and it has been communicated by Professor Heer of Zurich, as also by the Barão do Castello de Parva.

61 *Calathus angustulus*.

*Calathus angustulus*, *Woll*, *loc cit* 349 (1862)

*Habitat* Teneriffam excelsam humidam, sub lapidibus corticeque arborum laxo putrido, rarior

The comparatively narrow outline and pale reddish-brown hue of this *Calathus*, combined with the shape of its prothorax (which is a trifle narrower behind than before) and the exceedingly numerous punctures down the alternate interstices of its *elliptic* elytra, will at once characterize it. It is the only Canarian species in which I have observed punctures on the *first* elytral interval, where there are usually two or three at the extreme base. Its smaller size and less margined, differently shaped prothorax, added to its more rounded, less flattened elytra and more numerous impressions, will, apart from other differences, readily separate it from the last species. Indeed, in general contour it has perhaps more in common with the *C. carinatus* than with any other member of the genus here described, but its paler colour, and narrower and somewhat less depressed elytra (with then more numerous punctures and less arcuated basal line), in combination with its posteriorly narrower prothorax and the fimbriated hinder tibiæ of its male sex, will immediately distinguish it from that insect.

The *C. angustulus* occurs sparingly throughout the sylvan regions of Teneriffe, especially towards their upper limits,—where it may be found under damp stones, and beneath the loose rotting bark of trees. In such positions I have taken it on the ascent from Ycod el Alto to the Cumbie, at the Agua Mansa, and in the laurel-woods above Point Anaga and Taganana. It has also been communicated by the Barão do Castello de Paiva.

### 62 *Calathus depressus*

*Calathus depressus*?, Brulle, in Webb et Berth (*Col.*) 55 pl 2 f 1 (1838)  
 ———, Woll, *loc cit* 350 (1862)

*Habitat* in sylvaticis Teneriffæ, sub lapidibus vulgaris

The dark hue and broad outline of this *Calathus* (the prothorax of which is considerably wider behind than in front, and is but slightly recurved at the edges), added to its rather deeply striated elytra (which are subopaque in both sexes, and have their discal punctures as follows —from about 6 to 10 on the third interval, from about 5 to 7 on the fifth, and from about 1 to 3 on the seventh), will sufficiently characterize it. The hinder tibiæ of the male are almost (if not indeed entirely) simple, and even the intermediate ones are but very shortly and obscurely fimbriated towards their inner apex; nevertheless the latter are quite sufficiently so, I think, to warrant its admission into my second Section. Although M. Brulle's very brief and meagre description applies almost equally to about two-thirds of the Canarian *Calathi*, yet, with the assistance of his figure, and of the size there given of it (which, however, does *not* tally with what he states), I believe that this is the insect to which he intended to apply the name of *C. depressus*.

It is universal within the sylvan districts of Teneriffe, and is perhaps the most common of the Canarian *Calathi*. I have taken it at and above Ycod el Alto, at the Agua Mansa, and at the Agua Garcia, as also at Las Mercedes and in the woods towards Taganana and Point Anaga. It has likewise been communicated by Professor Heer of Zurich and by the Barão do Castello de Paiva.

### 63 *Calathus appendiculatus*

*Calathus appendiculatus*, Woll, *loc cit* 351 (1862)

*Habitat* Canariam Grandem in montibus sylvaticis inter Galdar et Teror d. 21. Ap. a. d. 1858 pauca exemplaria deprehendi.

Apart from all other characters, the peculiar sexual differences of this fine *Calathus* (the males of which are entirely bright, whilst the

females have their *prothorax* and elytra opaque) will at once separate it from all the others here enumerated. In their elytral impressions, the present insect and the two following ones are on the ordinary type,—the number being reduced to 3 or 4 on the third interval, from which it would appear, that those species which have them more or less increased are (according to the data hitherto accumulated) confined to Teneriffe. The *C. appendiculatus* seems to be peculiar to the sylvan regions of Grand Canary,—where, on the 21st of April 1858, I captured a few specimens of it, from beneath moist rotting bark, in the remains of the ancient forest of El Dorames, on the mountain-road between Galdar and Teror.

#### 64 *Calathus barbatus*.

*Calathus barbatus*, Woll, *loc cit* 352 (1862)

*Habitat* Canariam Grandem, in regionibus El Monte et Tarajana lectus

Like the last species, the *C. barbatus* would appear to be peculiar to Grand Canary,—descending, however, into subsylvan spots of a rather lower elevation than those tenanted by that insect. It may be known from it by its very much smaller size and by its sexes being almost equally shining,—its prothorax being in them *both* (as indeed is the case with all the Canarian *Calathi* except the *appendiculatus*) equally polished. In minor characters, its elytra are a trifle more convex than those of the *appendiculatus*, and have their basal line rather more curved, and the four hinder tibiae of its males are fimbriated along a rather shorter portion of their inner edge. I took it, not uncommonly, in the region of El Monte, as also on the mountains of Tarajana, during the spring of 1858.

#### 65 *Calathus spretus*

*Calathus spretus*, Woll, *loc cit* 352 (1862)

*Habitat* in Hierro, mense Februario A.D. 1858 repertus

In general aspect the present *Calathus* comes so near to the *C. barbatus*, that, were it not for the essential differences displayed by the male-tibiae of the two species, I should not have hesitated to consider them as identical, but since the former has the four hinder tibiae of its males *almost* simple internally, and the posterior pair straight, whilst the latter has them powerfully fimbriated, with the posterior ones slightly curved, I cannot but regard them as dissimilar, and so lay greater stress on the *other* minute differences which they display *inter se* than I should ordinarily have done. In-

dependently, therefore, of this primary distinction (which of itself would be sufficient to separate them), I may just add that the *C. spretus* may be known from its ally by (on the average) its slightly larger bulk and rather darker hue, by its prothorax being perhaps a little less rounded at the sides, and its elytra a little *more* so, and by the latter being just perceptibly more convex and opaque, with then basal line somewhat straighter

Whilst the *C. barbatus* is apparently confined to Grand Canary, the present species has been observed only in Hierro,—where several examples of it were captured by Mr Gray and myself, during our visit to that island, in February 1858

## Genus 22 ANCHOMENUS

Bonelli, *Observ Ent* 1 tab syn (1809)

### 66 *Anchomenus Nichollsi*, n sp

*A* capite prothoraceque nigro-piceis, nitidis, hâc angusto, valde cordato, ad latera haud explanato, postice leviter punctato, elytris ovalibus, obscurioribus sed in limbo brunneis, subopacis, leviter striatis, interstitio tertio punctulis 2 (rarius 3) notato, punctis in serie marginali maximis, lineâ basali (inter humeros et scutellum) elevatâ, curvatâ, palpis, antennis pedibusque elongatis, rufo-testaceis —Long corp lin 4

*Habitat* in elevatis Teneriffæ et Gomeræ, tempore vernali a d 1862 a DD Crotch et Nicholls repertus, cujus in honorem nomen triviale proposui

The opaque and rather apically-shortened elytra of the present insect and the following one give them such a totally different appearance from any *Anchomenus* with which I am acquainted that I had at first thought they must be generically distinct, nevertheless the details of their mouth show no modifications of sufficient importance to warrant their separation, their simple claws and the entire tooth of their mentum assigning them to that group. Then palpi, as well as their paraglossæ, are certainly longer than is the case in the ordinary *Anchomenus*, and their wings are obsolete, but such characters cannot be of more than specific signification, being merely of degree and not of kind. They have something in common with *Dyscolus*, of Dejean, the slightly bilobed penultimate articulation of all their tarsi so far *approaching* the structure which obtains (more or less) in that genus that Dr Schaum is of opinion that it will have to be remerged ultimately into *Anchomenus*.

The detection of the *A. Nichollsi* is due to the researches of Dr

Crotch and S T Nicholls, Esq, who, during an expedition to these islands in the spring of 1862, obtained a few examples of it, at a high elevation, both in Teneriffe and Gomera,—namely, above Yeod el Alto of the former, and “on the slope below the laurel-region above Heimgüa” of the latter. It is one of the most interesting and important of their discoveries, and I have much pleasure in dedicating the species to S T Nicholls, Esq, as an acknowledgment of his services in the cause of entomology, in conjunction with those of his indefatigable companion Dr Crotch.

### 67 *Anchomenus debilis*, n sp

*A* præcedenti similis sed vix minor, obscurior, prothorace paulo brevior, utrinque versus angulos posticos sensim minus recto, basi fere impunctato, elytris magis ovatis (nec ovalibus), et utrinque in medio parum subito amplius, vix opacioribus et levius (sc levissime) striatis, in limbo subconcoloribus, lineâ basali minus curvatâ et minus elevatâ, antennis pedibusque sensim brevioribus, obscurioribus, illarum articulis basalibus (sed præsertim subbasalibus) conspicue obscurioribus — Long corp lin  $3\frac{1}{3}$ – $3\frac{2}{3}$

*Habitat* Canariam Grandem, inter lapillos per marginem cujusdam rivuli juxta oppidum Teror mense April 4<sup>to</sup> 1858 pauce captus

It is barely possible that the present *Anchomenus* may be an insular modification of the preceding one, but I do not think that such is the case, and certainly it would be very unsafe to treat it as such,—seeing that the *A Nichollsi* occurs in *two* different islands, without any appreciable variation. The *A debilis* is a trifle smaller than its ally, and has its limbs a little obscure and more abbreviated,—the antennæ moreover having their basal (though more especially their subbasal) joints conspicuously darkened, its prothorax is somewhat shorter, having its sides less rectangular (or more oblique) posteriorly, and is nearly impunctate at the base, and its elytra are more ovate (or less regularly *oval*), being rather suddenly rounded about the middle, just perceptibly opaker, still more lightly striated, with their margin scarcely paler than the rest of the surface, and with their basal rim (between either shoulder and the scutellum) both less elevated and less curved.

The *A debilis* appears to be of the greatest rarity,—the only specimens which I have seen (twelve in number) having been captured by myself from under small stones at the edges of a little stream immediately outside the town of Teror, in Grand Canary, during April 1858.

68 *Anchomenus albipes*

*Carabus albipes*, *Illig., Mag. für Ins.* 1: 54 (1801)

*Anchomenus pallipes*, *Woll., Ins. Mad.* 33 (1854)

— —, *Id., Cat. Mad. Col.* 12 (1857)

— *albipes*, *Schaum., Nat. der Ins. Deutsch.* 1: 408 (1860)

*Habitat* per margines rivulorum Fuerteventurae, hinc inde vulgaris

The *A. albipes*, which abounds throughout the greater portion of Europe, and is universal in damp spots at Madeira, and which I have received also from the Azores, appears (so far as observed hitherto) to be confined at the Canaries to Fuerteventura, where it is common at the edges of the few small streams which that barren island produces. It was first found by Mr. Gray and myself at La Antigua (on our way from Agua Bueyes to Port Cabras), on the 28th of January 1858, and during April of the following year I took it abundantly in the Rio Palmas.

69 *Anchomenus marginatus*

*Carabus marginatus*, *Linn., Fna. Suec.* 222 (1761)

*Platynus marginatus*, *Brulle, in Webb et Beith (Col.)* 56 (1838)

*Anchomenus marginatus*, *Woll., Ins. Mad.* 33 (1854)

— —, *Id., Cat. Mad. Col.* 12 (1857)

— —, *Schaum., Nat. der Ins. Deutsch.* 1: 412 (1860)

*Habitat* Canariam, Teneriffam et Gomeram, hinc inde haud infrequens

The common European *A. marginatus* (which occurs, though rarely, in Madeira, and which is recorded by M. Morelet at the Azores) is tolerably abundant in certain localities at the Canaries, though at present I have myself observed it only in the islands of Grand Canary and Teneriffe. In the former I took it at Arguineguin (along the edges of the small pool, or lake, close to the sea), and in the latter (from whence it has also been communicated by the Barão do Castello de Paiva) in moist spots near Sta Cruz and at Ycod el Alto. It has however been met with, more recently, by Dr. Crotch, in Gomera.

## Genus 23 OLISTHOPUS

Dejean, *Spec. Gen. des Col.* iii 176 (1828)

70 *Olisthopus palmensis*, n. sp.

*O. æneo-fuscus*, latiusculus, subdepressus, nitidus, prothorace fere impunctato, elytris oblongis, ad humeros subobtusis, leviter striatis, interstitiis subtilissime alutaceis et (nisi oculo fortissime armato) fere impunctatis, tertio punctis tribus notato, limbo plus minus obscure pallidiore, antennis, palpis pedibusque pallido-testaceis, illis versus apicem paulo obscurioribus.—Long. corp. lin.  $2\frac{2}{3}$ — $3\frac{1}{4}$

*Habitat* Palmam, in locis intermediis, passim

It is somewhat remarkable that, whilst the *O glabratus* is universal throughout Grand Canary, Teneriffe, and Hierro, it is represented in Palma by the present species, which occurs, in like manner, at nearly all intermediate elevations. The *O palmensis* may be known from its ally by its larger size and broader outline, by its rather browner, less shining and flatter surface, and by its elytra being less acute at the shoulders, more finely striated, and with their interstices (when viewed beneath the microscope) not only *minutely alutaceous* but with the additional punctules so small as to be scarcely perceptible. I have taken it, amongst leaves and rubbish, at the base of the perpendicular rocks which form the sides of the Barranco de Sta Cruz, as also on the ascent of the Cumbre above Buenavista, and in the Barranco de Galga (towards the north-east of the island), and it was likewise captured, during the spring of 1862, by Dr Crotch.

#### 71 *Olisthopus glabratus*.

*O æneo-niger*, angustulus, subconvexus, nitidissimus, prothorace fere impunctato, elytris oblongis, ad humeros acutis, profunde striatis, interstitiis sat distincte punctulatis, tertio punctis tribus notato, limbo plus minus distincte pallidior, antennis, palpis pedibusque pallido-testaceis, illis versus apicem obscurioribus — Long corp lin 2-3

*Olisthopus glabratus*, Brulle, in *Webb et Berth (Col)* 56 (1838)

*Habitat* in Canaria, Teneriffa, Gomera et Hierro, in locis inferioribus et intermediis, hinc inde haud infrequens

As may be gathered from what has been said, the smaller size, narrower outline, darker hue, and more convex and shining surface of the present *Olisthopus*, in conjunction with its more deeply striated elytra (which are acuter at the shoulders, more brightly testaceous at the sides, and have their interstices more distinctly punctulated and *unalutaceous*), will at once separate it from the last species. It is universal throughout Grand Canary, Teneriffe, Gomera, and Hierro (in the last of which it was likewise captured by Mr Gray, and in Gomera by Dr Crotch),—occurring beneath stones, though not very commonly, at low and intermediate elevations, but it has not yet been observed in either of the eastern islands of the Group\*

\* Amongst five examples of *Olisthopus* communicated to me in 1856 by Dr Heer of Zurich, and taken at the Canaries by M Hartung, are four of the *O elongatus*, Woll, and one of the *glabratus*, Br. The whole were sent under the latter name, and were stated to have come from Lanzarote, but as M Hartung collected also in Teneriffe, I have not the slightest doubt that the specimen of the *glabratus* was from that island, and had become accidentally mixed up, afterwards, with those from Fuerteventura and Lanzarote. Nevertheless as I

The *O glabratus* is very closely allied to the *O maderensis*, which abounds on the mountains of Madeira, but I believe, nevertheless, that it is truly distinct. It differs in being a little more shining, in having its prothorax a trifle larger, rather more produced in the centre behind (in front of the scutellum), and with the sides and base comparatively unpunctured, and in its elytra being rather more oblong (or straighter at the edges and a little acuter at the shoulders), just perceptibly less convex, more deeply striated, with their interstices more evidently punctulated and unalutaceous (even beneath the microscope), and with their suture (except occasionally the hinder portion) not paler than the disk.

## 72 *Olisthopus elongatus*

*Olisthopus elongatus*, Woll, *Ins Mad* 38 (1854)

——, *Id*, *Cat Mad Col* 14 (1857)

—— *glabratus*, Hartung [nec Brulle], *Geolog Verh. Lanz und Fuert* 140 et 141

*Habitat* in Lanzarote et Fuerteventura, ubique sat vulgaris

The *O elongatus* (which occurs in Madeira and Porto Santo) is rather common throughout Lanzarote and Fuerteventura,—where it was captured by Mr Gray and myself in January 1858, and subsequently (by myself) during the spring of the following year, and where it would seem to take the place of the *O glabratus*, which is *all but* universal in the remaining islands of the Canarian archipelago. I have not the slightest hesitation in regarding it as the *Olisthopus* referred in M Hartung's catalogue to the *glabratus* of Brulle,—first, because the latter does not appear to exist in either Lanzarote or Fuerteventura (in *both* of which islands he implies his species to have been found), and, secondly, because, of the five specimens communicated to me by Dr Heer under the name of "*glabratus*," as Lanzarotan examples and collected by M Hartung, no less than *four* were the *elongatus*. That the solitary *O glabratus*, included amongst them, was from Teneriffe, and accidentally mixed up (afterwards) with the others, I have already recorded my conviction in the foot-note on the preceding page.

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had not myself visited the Canaries when I published my Madeiran Catalogue, in 1857, I was of course unaware that the *O glabratus* does not occur in the two eastern islands of the Canarian group, and I consequently mentioned in a foot-note (*vide* p 12) that I had received a Lanzarotan example of that insect from Professor Heer. I would wish, therefore, now to correct this error (for I am perfectly satisfied that such it is), since it is an important fact, topographically, that a species so general as the *O glabratus* is in the central and western portions of the archipelago should be replaced in Lanzarote and Fuerteventura by the Madeiran *elongatus* (which has not yet been observed elsewhere at the Canaries).

Genus 24 **PLATYDERUS**Stephens, *Ill Brit Ent* 1 101 (1828)73 **Platyderus alticola**, n sp

*P* angustulus, rufo-piceus, depicssus, capite prothoraceque nitidis, hâc elongato-subquadrato postice vix angustiore, angulis posticis subiectis, per basin ipsissimam paulo sinuato, elytris elongato-oblongis, subopacis, grosse alutaceis, ad humeros valde acutis, subcrenato-striatis, interstitio tertio punctis tribus notato, antennis, palpis pedibusque pallidioribus

*Var*  $\beta$  [an species distincta?] Paulo minor, pallidior, prothorace ad basin paulo magis recto (vix sinuato), angulis posticis rectioribus, elytris vix ovatoribus nitidioribus, paulo minus alutaceis — Long corp lin 4-4½ (var  $\beta$ , 3½)

*Habitat* sub lapidibus in montibus excelsioribus Teneriffæ, usque ad 8000' s m ascendens *Varietatis*  $\beta$  exemplar unicum, in montibus inferioribus maritimis juxta Sanctam Crucem captum, solum vidi, forsân ad speciem secundam pertineat

This large and distinct *Platyderus* appears to be of the greatest rarity, and to be confined to exceedingly elevated spots on the mountains of Teneriffe,—where in May of 1859 I captured six specimens of it, from beneath stones, on the lofty Cumbre, adjoining the Cañadas, above Ycod el Alto. It is partly in fact this peculiarity of its habits which makes me look with suspicion on a single specimen taken near Sta Cruz (on the flanks of the low, maritime range which forms the northern boundary of the Barranco do Passo Alto), and which I have described above as a variety of the *alticola*. It may possibly be the exponent of a closely allied species, nevertheless, until further material has been obtained, I think it scarcely safe to regard it as such. It is a little smaller and paler than the examples from the Cumbre, its prothorax is rather straighter (or less sinuated) along the extreme base, and with the posterior angles less obtuse, and its elytra are a trifle more ovate (or expanded behind the middle), and just perceptibly more shining (or less coarsely alutaceous)

74 **Platyderus tenuistriatus**, n sp

*P* capite prothoraceque nitidis, illo nigro-piceo, hâc (una cum elytris) rufo-piceo, subquadrato postice angustiore, angulis posticis obtusiusculis, per basin ipsissimam vix sinuato, in disco antico subconvexo, elytris oblongis, subopacis, subtilissime alutaceis, ad humeros acutiusculis, tenuiter striatis, interstitio tertio punctis tribus parvis notato, antennis, palpis pedibusque pallidioribus — Long corp lin 3

*Habitat* Teneriffam, a W D Crotch semel tantum lectus

The single example from which the above description is drawn-out was captured in Teneriffe by Dr Crotch, during the spring of 1862, but he has, unfortunately, no note as to the precise locality. It may at once be recognized from the *P. alticola* by its very much smaller size and less elongate outline, by its head being darker, whilst the rest of the surface is, on the contrary, still paler or more rufescent, by its prothorax being more quadrate, though rather rounded at the sides and more narrowed behind (and therefore with the posterior angles more obtuse), as well as convexer on the fore disk and less sinuated along the basal edge, and by its elytra being much more finely alutaceous, more delicately striated, less acutely porrected at the shoulders, and with the raised line between either humeral angle and the scutellum both less elevated and less curved.

Genus 25 **PTEROSTICHUS**, *Auct*

(Subgenus **Pœcilus**, *Bon*)

75 **Pterostichus crenatus**.

*Carabus crenatus*, *Hoffm*, in *litt*

*Feronia crenata*, *Dej*, *Spec Gen des Col* iii 226 (1828)

— —, *Brullé*, in *Webb et Berth* (*Col*) 56 (1838)

*Habitat* Lanzarotam et Fuerteventuram, in locis intermediis, rarior

The *P. crenatus*, which is recorded in Portugal and Sicily (indeed I possess it from the former), is found, though somewhat rarely, in Lanzarote and Fuerteventura,—in both of which islands it was taken by Mr Gray and myself, during January 1858. It seems to make its appearance after the winter-rains, and to occur at intermediate elevations. My Lanzarotan specimens were all collected from beneath stones, in the open, cultivated fields on the mountains immediately to the south of Hania.

(Subgenus **Lagarus**, *Chaud*)

76 **Pterostichus figuratus**, n. sp.

*P. piceo-niger*, nitidus, depressus, capite impunctato, prothorace elongato-subquadrato postice paulo angustiore, basi profunde et sat crebre punctato necnon utrinque foveâ lineiformi subnectâ impresso, elytris oblongis, profunde crenato-striatis, antennis, palpis pedibusque læte rufo-piceis.—Long corp. lin 2½

*Habitat* in Teneriffa, ab oculatissimo W. D. Crotch nuper depressus

A single example only of this well-marked *Pterostichus* has come

hitherto beneath my notice. It was captured by Dr Crotch, during the spring of 1862, in Teneriffe, but he cannot now recall the precise locality. It may at once be known by its flattened surface, by its piceous-black hue and brightly rufescent limbs, by its elongate-quadrate prothorax being a little narrowed, and rather deeply and thickly punctured, behind, and by its coarsely crenate-striated elytra having their short scutellary stria completely confluent with the sutural one, and the outwardly-directed basal portion of the latter, apparently, obsolete. In its somewhat parallel-oblong outline, depressed surface, and deeply crenate-striated elytra, the *P. figuratus* is a little suggestive, at first sight, of an excessively diminutive *P. crenatus*, nevertheless when closely inspected it will be seen to be totally distinct from that insect in all its characters, and moreover I believe that its main features will associate it rather with the members of the *Lagarus*-group than with those of *Pœcilus*.

(Subgenus *Orthomus*, *Chaud.*)

#### 77 *Pterostichus longulus*

*P. ater* (vel piceo-ater), oblongus, nitidissimus, prothorace subquadrato, ad latera subæqualiter rotundato, impunctato sed ad basin utrinque foveis duabus (internâ se lineiformi subarcuatâ profundâ, sed externâ breviori subrotundatâ plus minus indistinctâ) impresso, per marginem basalem ipsissimum angustissime marginato, elytris subparallelis, profunde crenato-striatis, interstitiis paulo convexis, tertio punctis duobus impresso, antennis, palpis pedibusque piceis.

*Var. β discors* [an species?] Prothorax ad latera magis rotundatus, angulis posticis paulo obtusioribus, foveâ basali externâ subobsoletâ, elytrorum striis simplicibus nec crenulatis [*Teneriffa* a Dom Schaum communicatus]—Long corp. lin 3-4½.

- Feroma barbaia*, *Brulle* [nec Dej.], in *Webb et Berth* (Col.) 56 (1838)
- *longula*, berytensis et prælonga, *Reiche*, *Ann. de la Soc. Ent. de France* (3<sup>ème</sup> série), III 616, 618, 619 (1855)
- *elongata* (*Klug*), *Chaud.*, *Stett. Ent. Zeit.* 116 (1859)
- *canariensis*, *Hartig* [nec *Brullé*], *Geolog. Verh. Lanz und Fuert* 140, 141

*Habitat* in Lanzarota et Fuerteventura, vulgaris, in Canaria, minus frequens, necnon in Teneriffa, rarus.

The present *Orthomus* appears to be identical with the *Feroma longula* of Reiche and Sauley, for types of which, from Egypt and Syria, I am indebted to Dr Schaum. The Canarian specimens have their elytral striæ rather more decidedly crenulated than seems to be the case in the Egyptian and Syrian ones, and their prothorax is quite impunctate, whereas in the example from Egypt there are

some scattered punctures at the base. These differences, however, are very trifling, and indeed the *Syrian* type now before me has its pronotum, as in the state peculiar to the Canaries, totally unpunctured. The species occurs also in Greece, so that it would seem to be widely spread over Mediterranean latitudes. It is allied to the *P barbarus*, Dej. (to which indeed it was referred by M. Brullé), and still more so to the *P hispanicus*, from which I am by no means certain that it is really distinct\*. Judging from three specimens of the latter at present in my possession (one of which has been forwarded by Dr. Schaum, whilst the other two were captured by the Rev. Hamlet Clark at Granada), the Canarian insect differs almost solely in having its prothorax invariably unpunctured behind, and the stræ of its elytra a little deeper and more perceptibly crenulated.

The *P longulus* abounds in Lanzarote and Fuerteventura (in both of which it was taken by M. Hartung, Mr. Gray, and myself), and is likewise found, though more sparingly, in Grand Canary and Teneriffe. In the two former it is universal, occurring at all elevations, and indeed, on the 11th of March 1859, I met with it even in the little island of Graciosa, off the extreme north of Lanzarote. But in Grand Canary it is apparently more local, being nearly confined (so far as observed hitherto) to sandy spots about Las Palmas and the Puerto de Luz. In Teneriffe I have not myself noticed it, but it has been communicated from thence by the Barão do Castello de Paiva, and I have also received a specimen from Dr. Schaum, which he obtained from Professor Heer and which is stated to be Teneriffan. It was collected by M. Hartung, and differs from the ordinary examples in having its prothorax more rounded at the sides, with the hinder angles consequently more obtuse, and with the outer basal fovea almost obsolete, and in its elytral stræ being uncrenulated. I can scarcely believe, however, that it is more than an accidental aberration, or at the utmost a local variety.

That this insect is the one referred to in M. Hartung's catalogue

\* There would seem, however, to be a small cluster of nearly allied species, or forms of this immediate type, peculiar to these latitudes. My *P haligena*, from the Salvages, is another of them, and is closely related to the Canarian one; nevertheless it is rather smaller, its prothorax is shorter and narrower, with the outer basal impression less distinct, and the dorsal channel more abruptly terminated both before and behind, and the elytra of its *female* sex are more alutaceous and opaque, with their striae finer, and their interstices more depressed. In my description of it [*vide* 'Journ. of Ent.' 187] I contrasted it (as now) with its Canarian ally, but alluded to the latter as the "*P canariensis*, Brullé." On a more careful inspection, however, I perceive that so far as the *name* is concerned I was mistaken,—M. Brullé's *Feronia canariensis* being apparently a totally different insect.

as the *Feronia canariensis*, Brullé. I am enabled to state for certain, —having received several of his specimens, thus identified, from Dr Heer

(Subgenus *Haptoderus*, Chaud.)

### 78 *Pterostichus angularis*

*P* piceus, prothorace subquadriato, antice rotundato-ampliato postice angustiore, angulis ipsissimis posticis subacutis, margine laterali incrassato, postice subsinuato, fortiter canaliculato et basi utrinque lineâ valde profundâ impresso, elytris ellipticis, striatis, interstitio tertio punctis duobus magnis notato, ad apicem ipsum (in utroque sexu) plus minus vel conjunctim truncatis vel singulatim emarginatis, antennis, palpis pedibusque rufo-piceis

*Mas* major, lator, nigro-piceus, nitidus, convexus, elytris profunde striatis, interstitiis convexis, pedibus robustis

*Fem* paulo minor, angustior, rufo-piceus, (capite nitido excepto) opacus, subdepressus, elytris minus profunde striatis, interstitiis depressis, per suturam (præsertim postice) elevatis, pedibus minus robustis —Long corp lin 4-5½

♀ *Calathus angularis*, Brullé, in Webb et Berth (Col) 56 (1838)

♂ *Feronia canariensis*?, Brullé, in Webb et Berth (Col) 56 (1838)

*Habitat* sub lapidibus in sylvaticis Teneriffæ, hinc inde sat vulgaris

Were it not for the relative dilatation of the tarsi and, still more, for the fact that I have repeatedly taken them *in cortu*, the extraordinary dissimilarity of the sexes of this curious *Pterostichus* might almost have led to the idea that they were specifically distinct. And as such indeed, judging from his very meagre and unsatisfactory diagnosis, I believe that M. Brullé did absolutely regard them, —describing (unless I am much mistaken) the female under the name of *Calathus angularis*, and the male under that of *Feronia canariensis*! At least, after a careful consideration of his “diagnoses” (if such they may be called), I can come to no other conclusion, and, in partial accordance with this hypothesis, I have lately received from M. Chevrolat a supposed “type” of the *C. angularis*, which is undoubtedly the present insect. It is certain therefore, if M. Chevrolat’s type can (as I have every reason to believe) be relied upon, that the species now under consideration is, at all events, M. Brullé’s *C. angularis*, and the only question that remains is, whether it be not his *Feronia canariensis* likewise. Before critically examining it, I had considered the preceding species (the *P. longulus*) as the *F. canariensis* of Brullé, but this was simply through the fact of my having received it (a few years ago) thus identified from Prof. Heer. On looking closely however into M. Brullé’s list of Canarian Coleoptera, it is quite evident

to me that the insect which he referred to the *F. barbara* of Dejean must have been the nearly allied (though scarcely coincident) *P. longulus*, and that consequently his *F. canariensis* (which immediately follows it) was of necessity something different. Now, his comparison of the latter with the Pyrenean *Alysiator abaxoides*, and the differential characters which he draws between the two, utterly preclude the idea that his *F. canariensis* could possibly have been the species which I have just described as the *longulus* of Reiche, whilst the very few points to which he calls attention are all in favour of its tallying with the *male* (for he expressly mentions it as “*lusante*”) of the present *Pterostichus*. Indeed (the *P. longulus* disposed of) there is no Canarian insect to which his “description” could apply except the present one, and I think therefore that I am fully justified in treating his *C. angularis* and *F. canariensis* as identical\*. Assuming them therefore to be coincident, I have preferred the former specific name to the latter, as the more appropriate of the two,—the insect being found, apparently, in but *one* of the seven islands of the Group.

The *P. angularis* is universal throughout the sylvan regions of Teneriffe. During March of 1858 I took it abundantly, *in situ*, at the Agua Garcia, and it is also common at Las Mercedes, and in the forest above Taganana. It has likewise been communicated by the Barão do Castello de Paiva, as also by Dr. Heer (from the collection of M. Hartung).

#### 79 *Pterostichus harpaloides*, n. sp.

*P. piceus*, nitidus, prothorace convexo, transversim leviter undulato, subquadrato postice vix angustiore, angulis posticis rectis, margine laterali paulo incrassato, postico recto, leviter canaliculato et basi utrinque vix impresso, emarginatione anticâ subsinuata, elytris breviter ovato-oblongis, convexis, leviter striatis, interstitiis subdepressis, tertio punctis duobus (vel tribus) parvis notato, ad apicem (in utroque sexu) integris, antennis, palpis pedibusque rufopiceis, pedibus posticis brevibus.—Long corp. lin.  $3\frac{2}{3}$ —4.

*Habitat* ins. Hierro, in locis editioribus regionis sylvaticæ “El Golfo” dictæ mense Februario a D. 1858 pauce repertus.

\* It is much to be regretted that M. Buille should not have been a little more accurate in his descriptions. Apart from all other characters, if he had looked at the claws of his *C. angularis* he would have immediately perceived that it was no *Calathus* at all, and at least *one* of his diagnoses (all equally unintelligible) would have been thus removed into its *proper place*,—enabling after-observers *at all events* to guess what the insect really was to which he referred. His total silence too as to the exact *islands* in which the several species occur (though all the types which I examined in Paris, of MM. Webb and Beithelot, had their islands indicated by a separate label) deprives us of the *only possible clue* which we might have otherwise had for deciphering his insects.

The only specimens which I have seen of this singular insect are five which were captured by myself, from beneath stones, in the upper part of the wooded region of El Golfo, on the west of Hierro, during our visit to that island in February 1858. It offers so many peculiarities, that I need only refer to the diagnosis, but its comparatively convex prothorax and elytra (the former of which is almost free from impressions at its base and has its posterior angles right angles, whilst the latter are very lightly striated, with their discal punctures indistinct and sometimes obsolete), in conjunction with its exceedingly short hind legs (for a *Pterostichus*), may be especially noticed. Its sexes, too (barring, of course, the dilatation of its male-tarsi), are *similar*, both in outline and surface.

### Genus 26 **AMARA**

Bonelli, *Observat. Ent.* 1 (1809)

(Subgenus **Leiocnemis**, Zamm.)

#### 80 **Amara versuta**

*A. breviter ovata*, nigro-picea, æneo-micans, convexa, prothorace brevi, transverso, ad latera marginato et æqualiter rotundato, basi vix punctato (interdum impunctato) sed utrinque foveis duabus (interna sc. majore longiore, sed externâ parvâ, minus profundâ, subrotundatâ) notato, postice in medio transversim impresso, elytris paulo dilutionibus (fusco-piceis), crenato-striatis, antennis, palpis pedibusque testaceis.—Long. corp. lin. 2-2½.

*Amara versuta*, Woll., *Ann. Nat. Hist.* (3rd series) xi. 215 (1863)

— bifrons, Hartung [nec Gyll.], *Geolog. Verh. in Lanz. und Fuert.* 141

*Habitat* in Lanzarote et Fuerteventura, sub lapidibus, passim

The present very distinct little *Amara* (which I am informed by Dr. Schaum should be referred to the section *Leiocnemis*) is the only one of the genus which has hitherto been observed at the Canaries,—even the common European *A. tenebriosa*, which abounds at Madeira and the Azores, being apparently absent from the islands of that archipelago. The *A. versuta*, moreover, would seem to be confined to Lanzarote and Fuerteventura,—where it is decidedly rare, and occurs at intermediate elevations. It was found by Mr. Gray and myself in the former,—principally from under stones on the grassy plain immediately above the village of Los Valles (de Sta. Catalina), on the road to Hama, and by Mr. Hartung and myself in the latter. My Fuerteventuran examples were taken, beneath corn-stack refuse, at Olva, on the 31st of March 1859. Having received it from Dr. Heer under the name of "*A. bifrons*, Gyll.," I am enabled to state for certain

that it is the insect referred by him, in M. Hartung's list, to that species. It belongs, however, in reality, to a different *group*.

### Genus 27 ZABRUS.

Clairville, *Ent. Helv.* 11 80 (1806)

#### 81 *Zabrus crassus*

*Zabrus crassus*, Dej., *Spec. Gen. des Col.* 111 451 (1828).

— —, Zimm., *Mon. der Carab.* 42 (1831)

— —, Brullé, in Webb et Berth. (*Col.*) 57 (1838)

*Habitat* Teneriffam, præsertim in locis subelevatis, rarior

The two Canarian *Zabri* (both of them peculiar to Teneriffe) are very closely related *inter se*, but I believe truly distinct. The present one is a little more robust and ovate than its ally (being, on the average, a trifle more expanded posteriorly), and rather less shining (or a little more evidently alutaceous), its prothorax is just perceptibly broader, somewhat more strongly impressed behind, and *more widely depressed* at the sides, its elytra are very much more deeply striated, and its limbs are usually a shade darker. It is certainly the rarer of the two, and found for the most part at a rather higher altitude,—though I have taken it occasionally on the hills behind S<sup>ta</sup> Cruz at only a slight elevation above the sea. On the mountains, however, above Taganana, and at Las Mercedes, it appears more within its normal range.

#### 82 *Zabrus lævigatus*.

*Zabrus lævigatus*, Zimm., *Mon. der Carab.* 43 (1831).

*Habitat* Teneriffam, præcipue in locis subinferioribus, hinc inde vulgaris.

This appears to be the commoner of the two Teneriffan *Zabri*, though at the same time somewhat local. I have taken it rather abundantly in the dry cindery region between the Puerto Orotava and the Villa, where it occurs beneath stones during the spring, and it has also been captured by Dr. Crotch. It may be known from its ally by being, on the average, a little smaller and more oblong (or less dilated behind), by its prothorax being *more narrowly depressed* at the sides (particularly towards the posterior angles), altogether not quite so broad, and with its basal impressions perhaps somewhat lighter, and by its elytral striæ being much less deep, its limbs generally of a paler hue, and its entire surface just perceptibly more shining (or less distinctly alutaceous). I have received it from Dr. Heer (collected by M. Hartung) under the name of "*crassus*, Dej." ,

but it seems to be the true *laevigatus* of Zimmermann, Dejean's *crassus* being the preceding (and rarer) species. Both of these *Zabri* have also been communicated by the Barão do Castello de Paiva.

(Subfam XI DITOMIDES)

Genus 28. **ARISTUS.**

(Ziegler) Latr, *Règne Anim* (éd 2) iv 387 (1829).

83 *Aristus subopacus*, n sp

*A. niger*, subcylindrico-oblongus, calvus, subopacus, minutissime alutaceus; capite prothoraceque parce (illo profundius) punctatis, illo valde convexo integro (i e fronte vix impressâ), hôc brevi, ad basin subito et valde constricto, ad latera grosse marginato (angulis ipsis posticis rectis marginatis), elytris subparallels, leviter punctato-striatis, interstitiis depressis fere impunctatis, antennis ad apicem, palpis tarsisque rufo-piceis —Long. corp. lin 5

*Ditonus clypeatus*?, Brulle [nec Rossi], in Webb et Berth (Col) 57 (1838)

*Habitat* in montibus Fuerteventuræ, a me ipso Aprili mense a d 1859 sub lapide in summo monte "La Atalaya" dicto semel lectus

The only specimen which I have seen of this very distinct *Aristus* was captured, on the 4th of April 1859, from beneath a stone, on the summit of La Atalaya (above Betancuria),—the loftiest mountain of Fuerteventura. Whether it be the insect referred by M Brullé to the *Ditonus clypeatus* of Rossi, I am unable to say for certain, the greater number of his types (supposed to be in Paris) being either lost or inaccessible, but, judging from the very few words which he says about it, I think that it most probably is. It differs, however from the *clypeatus* in being rather larger, more parallel (or cylindric), and broader, in its entire sculpture being *very* much finer, in its head being more convex, and free from foveæ, in its prothorax being more strongly margined at the sides (even to the basal angles themselves), and with the anterior angles less porrect, and in its surface (which is totally free from pile) being more alutaceous and less shining. *Primâ facie* it has somewhat in common with the *Ditonus opacus*, from the south of Algeria.

(Subfam XII HARPALIDES)

Genus 29 **CRATOGNATHUS.**

Dejean, *Spec Gen des Col* iv 46 (1829)

The four species described below, I am informed by Dr Schaum, are referable to the genus *Cratognathus* of Dejean, and although the

first of them (the Lanzarotan and Fuerteventuran *C. solitarius*) has certainly much the facies of a small *Acinopus*, nevertheless its perfectly toothless mentum and the well-defined hinder angles of its prothorax would seem to assign it to *Cratognathus* rather than to that group. Indeed *Cratognathus* (of which the "*Harpalus viridis*," from Madeira, and the "*H. pelagicus*," from the Salvages, are also undoubted members) appears to be universal throughout these Atlantic islands, and it is probable therefore that there are members of it yet to be detected. It differs mainly from *Harpalus* proper (into which, however, it almost merges) in the *tendency* of its head, particularly in the male sex, to be greatly enlarged, in the emargination of its mentum being deep and quite *simple* (even the rudiments of the tooth which is seldom, if indeed ever, altogether untraceable in the true *Harpalus* being apparently absent), in its mandibles being perhaps slightly obtuser, in its wings being obsolete, and in the more developed spurs of its anterior tibiae. The *Cratognathi* are usually smaller and less cylindric than the *Acinopi*, but on the average perhaps a trifle larger than the ordinary *Harpalus*, and in colour they are almost invariably of a more or less dark piceous (seldom completely black), and quite free from any metallic tinge.

#### 84 *Cratognathus solitarius*.

*C. ater*, subcylindrico-oblongus, capite magno, prothorace subquadrato postice vix angustiore, basi utrinque fovea sat profundâ punctatâ impresso, elytris oblongis, profunde crenato-striatis, interstitio septimo ad apicem ipsissimum punctulis circa 2-4 (intendum indistinctis confusis) notato, antennis, palpis tarsisque rufo-ferrugineis, femoribus tibusque piceis.—Long corp lin 4½-5

*Cratognathus solitarius*, Woll, *Ann Nat Hist* (3d ser.) xi 215 (1863)

*Harpalus consentaneus*, Hartung [nec Dej], *Geolog Verhåltn Lanz und Fuert* 140 et 141

*Habitat* Lanzarotam et Fuerteventuram, sub lapidibus in locis intermedius et elevatioribus sat vulgaris

The more cylindric outline and blacker hue of this insect, combined with its deeply crenate-striated elytra and general aspect, give it more the character, *primâ facie*, of a small *Acinopus* than of a *Cratognathus*,

\* This insect, which I described in a paper on certain Coleoptera from the Salvages, published in the 'Journal of Entomology,' vol 1 p 88, differs from all the species here characterized in being *relatively* broader, and with its prothorax (which is but very obscurely impressed behind) much more rounded (and *sub-equally* so) at the sides,—causing the angles to be more obtuse. Its elytra (which are subopake in the females) are only lightly striated in both sexes, and their seventh interstice has a few small punctules (as in the *C. solitarius*) at its extreme apex,—which last is less produced than is the case in its allies here enumerated. Perhaps it has more affinity with the *C. fortunatus*, from Grand Canary, than with any of the others.

nevertheless the structural features already alluded to would seem to refer it to the latter. In its habits the *C. solitarius* is a little peculiar, since it is less gregarious than either the *Cratognathus* or *Harpalus* usually are,—only one specimen being found, for the most part, beneath a single stone, and that one within a small hole (or *burrow*). It is universal throughout the intermediate and higher elevations of Lanzarote and Fuerteventura, in both of which islands it has been taken abundantly by M. Hartung and myself. I have received several examples of it from Dr. Heer (collected by the former) under the name of "*Harpalus consentaneus*\*, Dej." (with which, however, it has nothing whatever in common), so that I can state for certain that it is the insect thus referred to in the catalogue which was prepared by him for M. Hartung's volume. Fuerteventuran specimens have also been communicated by the Barão do Castello de Paiva.

### 85 *Cratognathus fortunatus*

*C. piceus*, oblongus, capite magno, prothorace subquadrato postice subrecte angustiore, basi utrinque vix punctulato vix impresso, elytris subovato-oblongis, striatis, interstitio septimo ad apicem punctis circa 2-4 notato, labro rufo-piceo, antennis, palpis pedibusque rufo-ferrugineis.

*Mus* nitidus, interstitius subconvexus.

*Form.* subopacus, interstitius subdepressus.—Long corp. lin 5-5½.

*Cratognathus fortunatus*, Woll., *Ann. Nat. Hist.* (3rd ser.) xi 215 (1863).

*Habitat* montes Canariæ Grandis, in pineto quodam regionis "Tarajana" dictæ mense Aprilis a D. 1858 sat copiose repertus.

The (comparatively) rather larger size of this species (which is the largest, on the average, of the Canarian *Cratognathus*), combined with the subopaque surface of its female sex, its very lightly impressed prothorax, and the series of small punctures at the apex of its seventh

\* It is rather remarkable that the common European *H. consentaneus*, Dej. (= *attenuatus*, Steph.) which is universal in the Madeiran Group, has not yet (so far as I am aware) been detected at the Canaries. It is certainly quoted by M. Brullé, but such a vast proportion of his insects are incorrectly identified [some few of them, moreover, having been, *I have the most conclusive reasons for believing*, even brought by Mr. Webb from Madeira!], that I cannot—with some 20,000 Canarian specimens now in my possession amongst which it does not occur—admit it, without further evidence, into the catalogue. The two nearly allied species *H. tenebrosus* and *Schaumii* are not uncommon at Teneriffe, and it is far from improbable, therefore, that the *latter* of them (for the former is mentioned by M. Brullé) may have been mistaken for the *consentaneus*. In like manner I cannot include the *H. rubripes*, Creutz.,—which is similarly recorded by M. Brullé, without the slightest reference to its *habitat*, or with so much as a single observation accompanying it. So far as my own experience goes, I am satisfied that the *H. rubripes* does not occur in *any* of these Atlantic islands, and I shall require better evidence than that afforded by M. Brullé's list before I believe that it does. I have not the slightest doubt that the insect he really re-

elytral interstice, must serve to characterize it. So far as I have observed hitherto, it appears to be confined to the mountains of Grand Canary,—where, during April 1858, I took it, in tolerable abundance, in one of the lofty Pñals of the district of Tanajana, above the village of San Bartolomé.

### 86 *Cratognathus micans*.

*C. praecedenti* similis, sed paulo minor, in utroque sexu fere aequaliter nitidus, prothorace ad latera paulo magis sinuato, elytris antice paulo magis truncatis (ergo vix brevioribus), interstiti septimi punctis obsoletis, pedibus paulo pallidioribus.

*Var. β Sanctæ-crucis* [an species distincta?] Minus politus, capite paulo minore, prothorace basi paulo minus subito angustiore (ergo angulis vix minus rectis), utrinque profundius foveolato, elytris profundius striatis, ad apicem ipsum plerumque paulo magis acuminatis.—Long corp. lin.  $4\frac{1}{2}$ –5.

*Cratognathus micans*, Woll., *Ann. Nat. Hist.* (3d ser.) vi. 215 (1863).  
*Harpalus vividus*, *Huitung* [nec Dej., nec Fab.], *Geolog. Verh. Lant. und Fuert* 140.

*Habitat* in ins. Gomera, prope San Sebastian vulgaris, sed *var. β* ad Teneriffam solam pertinet, circa urbem Sanctæ Crucis prædominans.

The rather smaller size and almost equally polished surface of the two sexes of this species, in conjunction with the absence\* of the punctures at the apex of the seventh interval of its elytra, will suffice to separate it from the *C. fortunatus*, to which it is nearly allied. It is possible that the form which I have regarded as the *var. β* may be specifically distinct, nevertheless its differential characters (although constant) are so minute that I think it safer to treat it as an insular modification peculiar to Teneriffe. As may be gathered from

ferred to was the *H. distinguendus*, Duft., which abounds at Madeira but which has not yet been observed at the Canaries, and that it was probably entered on the strength of an example brought by Mr. Webb (along with the *Scaphis abbreviatus* and perhaps also the *Harpalus consentaneus*) from Funchal.

\* Perhaps they should rather be called obsolete (as indeed I have done in the diagnosis) than *absent*, for out of 53 specimens of the typical *micans* which I have just examined, I find these subapical punctules present in 51, nevertheless in 64 of the Teneriffan "*var. β*" there is (as in the *C. æmulus*) no appearance of them whatsoever. In the *fortunatus*, on the other hand, in which I have mentioned them as a diagnostic feature, they are well developed in *all* (32 in number) which I have yet seen—so that the six in which they exist out of the 117 *micans* may be regarded as exceptional, or even accidental. It is scarcely necessary to allude to the *A. solitarius* (which has so many characters of its own that it could not be confounded with either of these more nearly allied forms), but in 12 examples of it which I have carefully overhauled, the punctules are always visible—only smaller than those of the *fortunatus*, still more apical, and often somewhat indistinct or confused.

the diagnosis, it may be known from what I have considered as the type (and which is confined to the island of Gomera) by being a little less polished, by having its elytra more deeply striated and perhaps somewhat more acuminate at their extreme apex, and by its being (on the average) just perceptibly smaller, and with its head not *quite* so largely developed. Its prothorax, too, has its foveæ rather more apparent, and its sides usually a trifle less sinuated behind, causing the angles to be (if anything) more obtuse.

The typical state abounds in Gomera, where it was taken by Mr Gray and myself, around San Sebastian and on the hills above it, during our visit to that island in February 1858, and I have received it from the Barão do Castello de Paiva, collected near Hermigua. The "*var*  $\beta$ ," on the contrary, seems to be the state which obtains in Teneriffe, where it is common in certain spots in the vicinity of S<sup>ta</sup> Cruz. My own specimens are principally from the rocky slopes about the Barranco do Passo Alto.

Several examples of the *var*  $\beta$  (which were found by M Hartung) have been communicated to me by Dr Heer under the name of "*Harpalus vividus*, Dej", so that I can vouch for its being the insect referred to in his catalogue of Lanzarotan\* Coleoptera, it has however nothing in common, except its generic characters, with that species.

### 87 *Cratognathus æmulus*, n. sp.

*C* *var*  $\beta$  *C micantis* similis, sed colore obscuriore (minus piceo), in utroque sexu minus nitidus (fœminâ etiam fere opacâ), capite paulo minore, prothorace basi paulo magis angustato (angulis ipsis posticis subacute prominulis), utrinque profundius impresso, elytris in sexu masculino valde profunde striatis, interstitiis convexis, in fœmineo leviter striatis, interstitiis depressis.—Long corp. lin  $4\frac{2}{3}$ .

*Habitat* Teneriffam sylvaticam, in montibus supra Tagananam captus.

\* It is unfortunate that M Hartung should not have been more careful in preserving the *localities* of his various species. I have no hesitation in saying that the *C micans* does *not* occur in either Lanzarote or Fuerteventura,—which are so distinctive in their fauna as to be almost separated topographically from the other islands of the archipelago. It has not as yet been detected even in Grand Canary, and there seems every reason to believe that the *var*  $\beta$  is confined to Teneriffe, and that what I have regarded as the type is peculiar to Gomera. From the specimens which have been forwarded to me by Dr Heer, I have not a shadow of doubt but that they are Teneriffan, and were most probably collected in the neighbourhood of S<sup>ta</sup> Cruz, and that, like the single example already alluded to of the *O. isthopus glabratus*, they were mixed up inadvertently (perhaps afterwards) with Lanzarotan species. Thus, what between a wrong *habitat* and a wrong *identification* (it being referred to an insect, the Maderan *C vividus*, from which it is totally distinct), a *twofold error*, of no slight importance in a geographical point of view, is on record.

In its external contour this insect approaches so near to the ordinary *Harpali* that, were it not for its slightly enlarged head and anterior tibial spurs, and (still more) for the difficulty (indeed almost the impossibility) of placing it in a different group from the preceding species, it could scarcely have been regarded as a *Chatognathus* nevertheless I am satisfied that to detach it from its allies on account of its *primâ facie* aspect would be most unnatural, and it must therefore remain as a small, and not very typical, member of the present genus. It is at once characterized by its darker (or less piceous) hue, by the more acute (in fact almost minutely-prominent) hinder angles of its prothorax, and by the very opposite appearance of its sexes,—the males being shining (though less so than in any of the foregoing species), with their elytra very deeply striated and the interstices convex, whilst the females are nearly opaque, with their striae light, and their interstices depressed. The only two examples which I have seen were taken in the sylvan region above Taganana, of Teneriffe, during May 1859.

### Genus 30 **HARPALUS**

Latreille, *Gen. Crust. et Ins.* 1: 201 (1806)

#### 88 **Harpalus tenebrosus**

*H. niger*, obscurissime subcyaneus, prothorace subquadrato, ad latera subæqualiter rotundato, angulis posticis obtusis, basi utrinque dense punctato, elytris striatis (striis fere simplicibus), antennis, palpis tarsisque rufo-ferrugineis, illis ante basin fusco-maculatis.  
*Mas nitidus, fæm subopacus*—Long corp. lin.  $3\frac{1}{2}$ – $4\frac{1}{2}$

*Harpalus tenebrosus*, Dej., *Spec. Gen. des Col.* iv. 378 (1829)

—, Brulle, in *Webb et Berth. (Col.)* 57 (1838)

— Wollaston, *Daws, Geod. Brit.* 144 (1854)

— litigiosus, Woll. [nec Dej.], *Ins. Mad.* 52 (1854)

—, Id., *Cat. Mad. Col.* 16 (1857)

— *tenebrosus*, Schaum, *Nat. der Ins. Deutsch.* 1: 598 (1860)

*Habitat* in Lanzarota, Fuerteventura et Palma, sat rarus

The European *H. tenebrosus* (which occurs also in Madeira and Porto Santo) is found sparingly throughout Lanzarote and Fuerteventura, and I have also taken it in the Banda, on the west of Palma. Although a well-known insect, I have given a diagnosis of it in order to point out its distinctions from the following species.

#### 89 **Harpalus Schaumi**, n. sp.

*H. niger*, prothorace brevi, transverse subquadrato, ad latera postice subiecto, angulis posticis subiectis, basi utrinque parce sed profunde punctato, elytris profunde crenato-striatis, interstitio sep-

timo ad apicem punctis circa 3-7 notato, antennis, palpis pedibusque rufo-ferrugineis

*Mas nitidissimus*, *fem* subopacus

*Var*  $\beta$  *Teneriffæ* [an species?] prothorace clytrisque paulo convexioribus, illo angulis posticis vix magis obtusis, his ad apicem paulo brevioribus necnon in sexu femineo vix minus opacis —  
Long corp lin  $4\frac{1}{2}$

*Habitat* in Teneriffa, Palma et Hierro, passim *var*  $\beta$ , in montibus supra Ycod el Alto capta, ad Teneriffam pertinet

In general outline and size the present *Harpalus* is closely related to the *tenebrosus*, but, in addition to its wanting the obscurely subcyanous tint which is scarcely ever entirely absent from that species, it may be known by its prothorax being shorter and more transverse, straighter at the sides (causing the posterior angles to be less obtuse), and more coarsely and sparingly punctured at the base, by its clytia being more deeply striated, with their striæ most *conspicuously crenate*, and with their seventh interstice furnished with a series of small punctures (varying from about two to six) behind, and by its femora and tibiæ being (instead of dark-piceous) bright rufo-ferruginous—like the antennæ and tarsi. Its subbasal antennal joints, too, are *not* infuscated, as is the tendency in that insect, and the surface of its male sex is more highly polished. I had thought at first, from its evident affinity with the *H. tenebrosus*, and from the presence of the small series of punctures towards the apex of its eighth clytral interstice, that it might perhaps be identical with the European *litigiosus*, but a type of that insect which has lately been communicated by Dr Schaum has convinced me that it certainly is *not* conspecific with it, and indeed Dr Schaum himself adds, "I consider it quite distinct, on account mainly of its strongly punctured striæ, I know, in fact, of scarcely any *Harpalus* which has them so coarsely sculptured."

I have taken it sparingly, from beneath stones, in Teneriffa (particularly around S<sup>ta</sup> Cruz and Orotava), in Palma (immediately above Buenavista, before the ascent to the Cumbre), and in the region of El Golfo, on the west of Hierro. Whilst at Ycod el Alto, in Teneriffa, during May of 1859, I obtained seven specimens (in the ravines of the lofty Pinal between that spot and the Cumbre) which do not *entirely* accord with those which I have found elsewhere, nevertheless their difference is so slight that I think they cannot be regarded as more than a variety of the *litigiosus*. Their prothorax and clytia are, both of them, a trifle more convex than is ordinarily the case, and the former has its basal angles just perceptibly more obtuse,

whilst the latter are a little more shortened behind,—leaving the pygidium still more exposed. The surface of their female sex, too, is perhaps, *if anything*, somewhat more shining

### Genus 31 **DICHIROTRICHUS.**

Jacq Duval, *Gen des Col* 1 35 (1857)

#### 90 *Dichirotrichus levistriatus*, n. sp.

*D. oblongus*, rufo-ferrugineus, subnitidus, fere calvus, capite prothoraceque leviter punctatis, hinc subquadrato-cordato, angulis ipsis posticis fere rectis, basi utrinque late et profunde impresso, elytris parallelis, leviter striatis, interstitiis punctatis, pedibus testaceis.—Long corp lin 3

*Habitat* Lanzarotam borealem, ad Salinas semel captus

The only specimen which I have seen of this insect was taken by myself at the Salinas (or salt-works), in the extreme north of Lanzarote, during March 1859. It is closely allied to the European *D. obsoletus*, but, judging from the single example now before me, it is rather more robust and oblong (the elytra being more parallel); its head and prothorax are more closely and less deeply punctured, and the latter has its extreme hinder angles a trifle more acutely prominent, its elytra are immaculate, with their sculpture lighter, its shoulders are a little more obtuse, and its entire surface is of a redder tint, and apparently almost free from pubescence.

### Genus 32 **STENOLOPHUS.**

(Megerle) Steph, *Ill Brit Ent* 1 165 (1828)

#### 91. *Stenolophus vaporariorum*.

*Carabus vaporariorum*, Fab [nec Linn 1761], *Syst Ent* 247 (1775).

— *teutonus*, Schrank, *Enum Ins Austr* 214 (1781)

*Stenolophus vaporariorum*, Brulle, in Webb et Berth (*Col*) 57 (1838)

— *teutonus*, Woll, *Ins Mad* 59 (1854)

— —, *Id*, *Cat Mad Col* 17 (1857)

— —, Schaum, *Nat der Ins. Deutsch* 1 613 (1860)

*Habitat* in Fuerteventura, Canaria, Teneriffa, Gomera et Palma, in humidis, frequens

The European *S. vaporariorum* (which is common at Madeira, and which I possess from the Azores) is widely spread over the Canarian archipelago,—where in all probability it is universal. At present, however, I have taken it in but five\* out of the seven islands of the

\* It is indeed recorded in M. Hartung's list of the Coleoptera of Lanzarote, but so many errors seem to have arisen through the mixing up (however unintentionally) of the insects of his different localities, that I think it hardly safe to admit it into my catalogue as Lanzarotan without further evidence

Group,—namely, in Fuerteventura, Grand Canary, Teneriffe, Gomera, and Palma. In Teneriffe I have observed it principally, in moist spots, around Sta Cruz, at Las Mercedes, the Agua Mansa, and at Ycod el Alto, and in Gomera at the edges of the small stream at San Sebastian. In Teneriffe and Gomera it was found likewise by Dr. Crotch.

## 92 *Stenolophus marginatus*.

*Stenolophus marginatus*, Dej, *Spec Gén des Col* iv 427 (1829)

— —, Brulle, in *Webb et Berth (Col)* 57 (1838)

— —, Leon Faun, *Faun Ent Franç* 1 145 (1854)

— —, Woll, *Ann. Nat Hist* (3rd series) ii 407 (1858)

*Habitat* in humidis Canariæ et Teneriffæ, rarissimus

The *S marginatus* of Mediterranean latitudes (which has been recorded in Spain, the south of France, Corfu, Greece and Egypt, and which is exceedingly rare in Madeira) occurs very sparingly at the Canaries. I have myself only taken it in the island of Grand Canary (by the edges of a small stream on the ascent to the Roca del Soueilho, from San Mateo), but a Teneriffan specimen has lately been communicated by the Barão do Castello de Paiva.

## 93 *Stenolophus dorsalis*.

*Carabus dorsalis*, Fab, *Ent Syst* 1 165 (1792)

*Acupalpus dorsalis*, Brulle, in *Webb et Berth (Col)* 57 (1838)

*Stenolophus dorsalis*, Woll, *Ins Mad* 60 (1854)

— —, Id, *Cat Mad Col* 17 (1857)

— —, Schaum, *Nat der Ins Deutsch* 1 619 (1860)

*Habitat* in humidis Canariæ, Teneriffæ et Gomeræ, hinc inde vulgaris

The European *S dorsalis* (likewise found, though sparingly, in Madeira) is tolerably common in certain spots at the Canaries. Up to the present date, however, I have myself observed it only in Grand Canary and Teneriffe,—namely (abundantly) near San Mateo and Teror, of the former, and around Sta Cruz, at Las Mercedes and the Agua Garcia, of the latter. It was however taken by Dr Crotch above Hermigua in Gomera, as well as in Teneriffe (from which latter island it has also been communicated by the Barão do Castello de Paiva)

## Genus 33 BRADYCELLUS

Erichson, *Kaf der Mark Brand* 1 64 (1837)

## 94 *Bradycellus ventricosus*, n sp

*B ovatus*, nigro-piceus, nitidus, prothorace subquadrato-cordato, basi utrinque profunde punctato, elytris convexis, ventricosus,

subcrenato-striatis, suturâ distincte necnon limbo ipsissimo obscurius angustiusque rufescentioribus, antennis fusco-testaceis, ad basin, palpis pedibusque pallido-testaceis, tibus ad apicem tarsisque ad basin obscurioribus —Long corp lin  $1\frac{1}{2}$ — $1\frac{1}{2}$

*Habitat* Teneriffam sylvaticam, sub foliis dejectis in humidis degens

The present beautiful and truly indigenous *Bradyellus* is closely allied to the Madenian *B. caeculus*, but is more ovate than that species (its elytra particularly being more rounded, convex, and ventricose) its eyes are larger, its prothorax is wider in front, narrower behind, and very much more deeply punctured on either side at the base, and its elytra are obtuser at their shoulders, and with their striae evidently crenulated. I have observed it only in the sylvan districts of Teneriffe,—having taken it sparingly, beneath stones and dead leaves, in the woods above Taganana, at Las Mercedes, the Agua Garcia, and at La Esperanza

### (Subfam XIII TRECHIDES)

#### Genus 34 TRECHUS

Clanville, *Ent. Helv.* n 23 (1806)

#### 95 *Trechus detersus*, n sp

*T.* capite prothoraceque nitidissimis, nigro-piceis (hâc ad latera et postice interdum paulo rufescentiore), hoc subquadrato, angulis posticis subiectis (ipsissimis acute prominulis), elytris ovalibus, rufo-ferrugineis, in disco plus minus paulo obscurioribus, leviter striatis, stria versus latera obsoletis, antennis infuscato-testaceis, ad basin, palpis pedibusque testaceis —Long corp lin  $1\frac{1}{2}$ —vix 2

*Habitat* in Lanzarota et Fuerteventura, sub lapidibus, passim

This *Trechus* (which appears to be confined to Lanzarote and Fuerteventura) is very nearly related to the common European *T. minutus*, of which, however, it certainly cannot be regarded as a geographical modification. Apart from its rather larger size, it may be known from that species by its darker head and prothorax, the latter of which is altogether more developed and very much squarer (being about as broad behind as before, and with its posterior angles nearly right angles), and has no impressions at the base, and by its shoulders being a trifle more pointed and acute. It occurs more particularly in Lanzarote, where it was taken both by Mr Gray and myself, but during the spring of 1859 I captured it also in Fuerteventura

96 *Trechus flavolimbatus*

*T. niger*, nitidus, prothorace transverse subquadrato postice paulo angustiore, angulis ipsissimis posticis minutissime prominulis, basi utrinque leviter foveolato, elytris oblongo-ovalibus, subdepressis, limbo plus minus flavo-testaceo, striatis (striis vix subcrenatis, exterioribus obsoletis), antennis nigro-fuscescentibus, ad basin rufo-testaceis, pedibus pallido-testaceis, tibiis plus minus obscurioribus — Long corp lin  $1\frac{1}{2}$ – $1\frac{3}{4}$

*Trechus flavolimbatus*, Schaum, in litt

— —, Woll, *Ann Nat Hist* (3d series) xi 216 (1863)

*Habitat* in Canaria, Teneriffa, Gomera, Palma et Hiero, vulgaris

Very closely related to the Madeiran *T. flavomarginatus*, of which indeed I had regarded it as a mere geographical state until Dr Schaum drew my attention, lately, to one or two small characters which I had overlooked. This induced me to examine the insect more critically, and I now agree with him that, however nearly allied to it, it undoubtedly cannot be referred to that species. It may at once be known from the *flavomarginatus* by its larger and more prominent eyes, by its prothorax being a trifle convexer, with much shallower foveæ on either side at the base, and with its hinder angles just perceptibly more obtuse, and by its elytra being flatter, a little less rounded at the sides (or more oblong), with their extreme humeral angles considerably less acute, and with their striæ (the outer ones of which are subobsolete) altogether more lightly impressed.

The *T. flavolimbatus* is universal in all the islands of the archipelago, except Lanzarote and Fuerteventura,—in which I have not observed it, and where I believe it does not exist, but in Grand Canary, Teneriffe, Gomera, Palma, and Hiero I have taken it, in greater or less profusion. In Teneriffe, Gomera, and Palma it was also met with by Dr Clotch. Though more abundant within the sylvan regions than elsewhere, it is found at nearly all elevations, and wherever there are dead leaves, or other vegetable refuse, for it to secrete itself beneath, nevertheless there is good reason for suspecting that many of the open districts in which it is common were once densely wooded, and that in such spots it may be but the exponent of a fauna which has mainly disappeared. In Teneriffe it was also captured by the Barão do Castello de Paiva.

97 *Trechus felix*, n. sp.

*T. nitidus*, rufo-piceus (largius piceus), sulcis frontalibus valde curvatis, profundis, prothorace subquadrato-cordato, angulis posticis ipsissimis acute prominulis, elytris obovatis, depressis, limbo (præsertim ad apicem) necnon suturâ postice obscure pallidioribus, pro-

funde subcrenato-striatis, antennis nigro-fuscescentibus, ad basin, palpis pedibusque testaceis —Long corp. ln.  $1\frac{1}{2}$ – $1\frac{3}{4}$

*Habitat* in Teneriffa sylvatica excelsa, sub ligno corticeque putrido in montibus humidis supra Tagananam mense Maio a D 1859 captus

Closely allied to the Madeiran *T. custos*, but unquestionably distinct. It may be known from that species by its frontal sulci being deeper and much more curved, by its prothorax being more cordate (or narrower behind), with the *extreme* angles however much more prominent, by its elytra being flatter, more coarsely subcrenate-striated, more thickly margined at the sides, and obovate (their widest portion being towards the base), and by its antennæ being rather longer and darker. Like that insect it is apparently confined to the sylvan districts of a high elevation, but is excessively rare,—the only locality in which I have taken it being in the forest above Taganana, of Teneriffe, immediately below the Cumbre. Like the *T. custos* of Madeira, it is found in the dampest spots,—beneath rotting wood and leaves, and under the moist decaying bark of trees.

### Genus 35 THALASSOPHILUS\*.

Woll, *Ins. Mad.* 71 (1854)

#### 98 *Thalassophilus* Whitæi

*Trechus littoralis*?, *Bulle* [nec *Dej.*], in *Webb et Berth. (Col.)* 58 (1838)

*Thalassophilus* Whitei, *Woll, Ins. Mad.* 71 tab. 11 f. 5 (1854)

— —, *Id., Cat. Mad. Col.* 21 (1857)

*Habitat* ad rupes aquosas et per margines rivulorum in Canaria, Teneriffa, Gomera et Palma, rarissimus

The *T. Whitæi*, which is of the greatest rarity in Madeira and Porto Santo, seems to be widely spread over the islands of the Canarian Group,—where, however, it is exceedingly scarce. I have captured it in Grand Canary (amongst wet stones and rocks at the edges of a small trickling stream on the southern side of, and within, the great crater of the Bandama), in Teneriffe (near Sta Cruz and at Las Mercedes), as also in Palma, and it was likewise taken by Dr Crotch at Ycod el Alto in Teneriffe, as well as in Gomera. Although usually quite as pale as the Porto-Santan type from which I origi-

\* Having established it in the 'Insecta Maderensia,' I retain this genus here, nevertheless it seems doubtful whether it can be strictly upheld as more than a Division of *Trechus*. "Your *Thalassophilus*," writes Dr Schaum, "is only a Section of *Trechus*, to which the *T. longicornis* belongs. The true distinction of the Section *Thalassophilus* is, that the recurved first stria, of the elytra, empties itself into the *third* one, whereas in *Trechus proper* it empties itself into the *fifth*."

nally characterized the species, I have taken it occasionally (both in Teneriffe and Palma) very much darker,—its subapical fascia being, as it were, suffused over the entire surface of the elytra. I have but little doubt that it is the insect referred by M. Brullé to the *Trechus littoralis* of Dejean (i. e. the *T. longicornis* of Sturm)

### Genus 36. PERILEPTUS.

Schaum, *Nat. der Ins. Deutschl.* 1: 663 (1860)

#### 99. *Perileptus nigrutilus*.

*P. omnino P. areolato* similis, sed vix major et minus nitidus (oculo fortissime armato grossius, præsertim in elytris, alutaceus), paulo magis pubescens, capite postice dilute rufescentiore, elytris (limbo postico pallido excepto) totis nigris, paulo magis parallelis, interstitis vix minus convexis, antennis paulo longioribus, robustioribus.—Long. corp. lin. 1–1 $\frac{1}{3}$

*Perileptus nigrutilus*, Woll., *Ann. Nat. Hist.* (3rd series) xi: 216 (1863)

*Habitat* Teneriffam, inter lapillos per marginem paludis cujusdam parvæ prope urbem Sanctæ Crucis sitæ copiose captus

Had I possessed but a few specimens to judge from, I should scarcely have ventured to regard the present *Perileptus* as more than a dark variety of the European *areolatus*, but since I have no less than 93 from which to compile my diagnosis, in the whole of which its small differential characters remain perfectly constant, I am induced to believe that it is truly distinct from (however nearly allied to) that insect. It may be known from it by being (on the average) a trifle larger and more pubescent, just perceptibly less shining, and (under a high magnifying power) more coarsely alutaceous, by its elytra (except their extreme apical margin) being always *entirely dark*, a little more parallel at the sides, and with their interstices somewhat less convex, by its head being rufescent behind, and by its antennæ being perhaps rather longer and more robust. It is possible indeed that it may be but a geographical modification of the *areolatus*, nevertheless, with the above-mentioned small differences constant in 93 examples, I think it would scarcely be safe to treat it as such. The only spot in which I have taken it, is by the edges of a very small pool at the head of the Barranco Santo, close to Sta Cruz of Teneriffe,—where, in June 1858, I obtained it in the greatest profusion, from beneath stones and shingle

## (Subfam XIV BEMBIDIADÉS)

## Genus 37 TACHYS

(Ziegler) Steph, *Ill Brit Ent* 11 4 (1829)

Following Schaum and others, I have retained *Tachys* as distinct from *Bembidrum*, since it appears to possess characters which render its isolation therefrom more desirable than is the case with the various other groups which are now usually treated as component parts of the *Bembidia*. Thus, apart from minor distinctions of proportions and outline, whilst in *Bembidrum* and its subdivisions the short scutellary stria of the elytra is more or less traceable and the sutural one is simple, in *Tachys*, on the contrary, the scutellary stria is absent and the sutural one is recurved at its apex. The anterior tibiae, also, in the latter are slightly more dilated, and are lopped-off obliquely towards their outer extremity,—a structure which gives them the appearance of being somewhat curved\*.

100 *Tachys bistriatus*Elaphrus bistriatus (Meg), *Dufts, Fna Austr* 11 205 (1812)Bembidum bistriatum, Woll, *Ins Mad* 73 (1854)— —, *Id, Cat Mad Col* 22 (1857)*Tachys bistriatus*, Schaum, *Nat der Ins Deutsch* 1 746 (1860)*Habitat* Gomeram, a cl W D Crotch nupeirime detectus

Two specimens which I cannot separate from the European *T bistriatus* (though at the same time, instead of being piceous-brown, they are testaceous with the head alone dark—thus agreeing, apparently, with the *pale variety* recorded by M. Duval and by Schaum) were taken by Dr Crotch, during the spring of 1862, in Gomera. One of these he has presented to the collection at the British Museum. The species (though in its normal state, as regards colour) occurs also in the intermediate elevations of Madeira.

101 *Tachys scutellaris*.*Trechus scutellaris*, Germ, *Thon, Ent Archiv*, 11 fasc 1 11 (1829)*Tachys scutellaris*, Steph, *Ill Brit Ent* 11 5 (1829)*Bembidum scutellare*, Dej, *Spec Gen des Col* v 39 (1831)*Tachys scutellaris*, Schaum, *Nat der Ins Deutsch* 1 745 (1860)*Habitat* in salinis Lanzarotæ, vulgaris

The European *T scutellaris* appears to be common in one or two salt spots in Lanzarote. On the muddy surface of the Salinas, or

\* In my 'Ins Mad' I had noticed this in a particular species and regarded it as a *specific* character (calling the insect by the trivial name of *cuv vinnianus*), but in reality it is a generic one.

brine-pits, in the extreme north of the island, it is abundant,—where it may be seen darting in and out of the crevices formed by the heat of the sun. In such positions it was taken by Mr Gray and myself, during January 1858, and in the spring of the following year I again met with it in the same locality.

### 102 *Tachys centromaculatus*, n. sp.

*T. niger*, elytris pallide testaceis, in disco communi postico macula magnâ nigrescente (ad utrumque latus abbreviatâ sed antice per suturam plus minus anguste productâ) ornatis, versus suturam sat distincte striatis, oculis valde prominentibus, prothorace transverso, latiusculo, postico paulo angustiore, ad angulos posticos late subrecurvo, antennis, palpis pedibusque pallide testaceis.—Long corp. lin 1-1 $\frac{1}{4}$ .

*Habitat* in salinis Lantarotæ, per margines lacus ejus salini “Januvio” dicti a corpore deprehensus.

For some time I had regarded this *Tachys* as a large and peculiar state of the *T. scutellaris*, but having been informed by my friend Dr Schaum that he believes it to be truly distinct, I have re-examined it more critically and have arrived at the same conclusion. It differs from the *scutellaris* in its rather larger size and somewhat broader outline, in its eyes being both larger and very much more prominent, in its prothorax being not only wider but also more broadly and evidently recurved at the basal angles, in its (pale-testaceous) elytra being almost free from a triangular scutellary cloud, and with the suffused postmedial fascia which characterizes its ally abbreviated on either side and reduced to a large well-defined patch, rounded behind and truncated in front (where, however, it is narrowly produced along the anterior portion of the suture), and by its antennæ, palpi, and legs being a trifle longer and of a uniformly pallid hue.

Like the *T. scutellaris*, the present species occurs in blackish places in Lantarot, but whilst that insect has been observed hitherto only at the Salinas in the extreme north of that island, the *centromaculatus* I have not yet met with except along the edges of the curious salt lake of Januvio, adjoining the south-western coast,—where, on the 26th of March 1859, I detected it, not uncommonly, during a visit, in company with the Rev R. T. Lowe, to that remote spot.

### 103 *Tachys curvimanus*

*Bembidium curvimanum*, Woll., *Ins. Mud.* 74 tab. 11 f. 6 (1854)

—, *Id.*, *Cat. Mad. Col.* 22 (1857)

*Habitat* insulas Canarienses, in Hierro sola adhuc hâud detectas

species late diffusa, sub lapidibus per margines rivulorum necnon in aquis, ab orâ maritimâ usque ad 8000' s m ascendens

The *T curvimanus*, which occurs sparingly in Madeira and Porto Santo, and which is so closely allied to the *T 4-signatus* of Mediterranean latitudes that Dr Schaum thinks it may *possibly* be but a small state of that species, is widely spread over the Canarian archipelago,—where in all probability it is universal, for although it has not yet been observed in Hierro, there can be but little doubt that it must exist there likewise. In Lanzarote (where it was also captured by Mr Gray), Fuerteventura, Grand Canary, Teneriffe, and Palma I have taken it, more or less abundantly, and in Gomera (as well as in Teneriffe) it was found by Dr Crotch. It occurs at nearly all elevations—in Teneriffe, for instance, from the immediate vicinity of Sta Cruz to the Agua Mansa, and even to the Cumbre (adjoining the Cañadas) above Ycod el Alto, more than 8000 feet above the sea. My Fuerteventuran specimens are from the Rio Palmas, and the Grand-Canarian ones from the region of El Monte.

#### 104 *Tachys hæmorrhoidalis*

*T niger*, nitidus, prothorace subcordato, convexo, ad basin utrinque vix impresso, elytris ovalibus, strus duabus versus suturam (externâ antice et postice abbreviatâ) utrinque impressis necnon maculis duabus (unâ sc obliquâ humerali et alterâ transversâ subapicali) rufo-testaceis (plus minus obscuris suffusis confluentibus) ornatis, antennis nigro-fuscis, ad basin pedibusque pallide testaceis.—Long corp lin  $\frac{3}{4}$ —1

Bembidium hæmorrhoidale, Dej, *Spec Gén des Col* v 58 (1831)

———, Duv, *Ann de la Soc Ent de France*, (2<sup>ème</sup> série) x 193 (1852)

*Tachys hæmorrhoidalis*, Schaum, *Nat der Ins Deutsch* 1 750 (1860)

*Habitat* in aquis Canariæ, Teneriffæ et Gomeræ, sat rarus

Closely allied to the *T Lucasi* (of Spain, northern Africa, Madeira, &c), but smaller, with its prothorax a little narrower and more cordate, and almost free from impressions behind, and with its elytra more rounded at the sides, impressed with only two (instead of three) striae towards the suture on each, with the two discal punctures less conspicuous, and ornamented with a *humeral* (as well as a subapical) blotch. The elytral patches, however, are often obscurely defined,—being usually more or less suffused, or even subconfluent. With the exception of the indistinct reddish blotch towards the shoulders (and which is sometimes exceedingly faint), it seems to me to agree precisely with the *T hæmorrhoidalis* of southern Europe, and Dr Schaum informs me that he can detect no other difference. Moreover in a

type (from Greece) which he has sent me, I can perceive a very evident rufescent tinge in that region of the elytra, and I have therefore no hesitation in regarding the Canarian species as identical with the European one. I have taken it in Grand Canary, and also immediately outside the Puerto Orotava of Teneriffe,—in the latter of which islands, as well as in Gomera, it was captured by Dr Crotch.

### Genus 38 **BEMBIDIUM.**

Latreille, *Gen. Crust. et Ins.* 1: 183 (1806)

(Subgenus **Philochthus**, Steph.)

#### 105 **Bembidium biguttatum.**

*Carabus biguttatus*, Fab., *Mant. Ins.* 1: 205 (1787)

*Bembidium vulneratum*, Dej., *Spec. Gén. des Col.* v: 182 (1831)

— *biguttatum*, Schaum, *Nat. der Ins. Deutschl.* 1: 737 (1860)

*Habitat* in Canaria Grandi, prope oppidum Teror semel lectum

The only specimen of this common European insect which I have as yet seen from any of the Atlantic islands was taken by myself in Grand Canary (at the edge of a small stream close to the town of Teror), during April 1858. I can detect nothing to separate it from the ordinary northern type, except that its prothorax is a little less strongly margined at the sides,—a difference which can scarcely be regarded (even if permanent) as indicative of more than a slight geographical modification.

#### 106 **Bembidium vicinum.**

*Bembidium vicinum*, Lucas, *Col. de l'Algérie*, 86 pl. 10 f. 9 (1849)

— — —, Duval, *Ann. de la Soc. Ent. de France*, (2<sup>ème</sup> série) x: 178 (1852)

*Habitat* in Lanzarota et Fuerteventura, per margines rivulorum, rarior

I refer this insect to the *B. vicinum* (from the south of Europe and the north of Africa) on the authority of Dr Schaum, who has also kindly sent me an Italian type for comparison. The Canarian specimens are altogether a little larger, broader, and more depressed than the example which he has communicated, and have their limbs perhaps somewhat longer and paler, but they do not differ sufficiently to warrant the supposition that they are specifically distinct. In habits and general aspect it is closely related to the European *B. cæneum*, but has its prothorax rather less rounded at the sides (the posterior angles being a little more prominent and defined), its surface a trifle more alutaceous and less shining, its stræ lighter, and

its elytra and limbs (which last are perceptibly slenderer) a shade paler in hue. It has been observed hitherto only in Lanzarote and Fuerteventura, in the latter of which it was taken by Mr. Gray and myself (by the edges of the little stream at La Antigua) in January 1858, whilst, during the spring of the following year, I again found it in (the Rio Palmas of) the same island, as also near Hama in the north of Lanzarote.

(Subgenus *Peryphus*, *Meg*.)

107 *Bembidium atlanticum*.

*Bembidium decorum*, Brulle [nec Dej.], in Webb et Berth (Col) 58 (1838)

— *atlanticum*, Woll, Ins Mad 77 (1854)

— —, Id, Cat Mad Col 23 (1857)

*Habitat* insulas Canarienses, in Hierro solâ adhuc haud detectum

The *B. atlanticum*, which is so common in Madeira and Porto Santo, is equally abundant at the Canaries, where there can be no doubt that it is universal. Nevertheless I did not happen to take it in Hierro, during our visit to that island in the winter of 1858, though in the other six islands of the Group it occurs almost wherever there is a stream, or pool of water, and independently of elevation. In Lanzarote and Gomera it was found likewise by Mr. Gray, and in Teneriffe, Gomera, and Palma by Dr. Crotch. It goes through the same extraordinary changes of colouring as it does at the Madeiras,—being generally more or less dark in comparatively moist or shady spots (when the elytral patches are often entirely obsolete), but for the most part brightly maculated in drier and more barren districts, and we accordingly find that the examples from Lanzarote and Fuerteventura are, on the average, very much paler than those from the rest of the archipelago. This is precisely analogous to the Porto-Santan specimens, as compared with those from Madeira. It was referred by M. Brulle to the European *B. decorum*,—from which, however, in all its states, it is perfectly distinct.

(Subgenus *Lopha*, *Meg*.)

108 *Bembidium concolor*.

*B. nigro-cyanum*, capite prothoraceque obscure viridi-micantibus, hâc cordato, angulis posticis rectis, basi punctato, elytris im-maculatis, antice striato-punctatis (seriibus sublateralibus profundioribus), pone basin transversim impressis, punctis duobus discalibus valde distinctis utrinque notatis, antennis fusco-nigris,

ad basin ipsissimam pedibusque rufo-piceis — Long corp lin 2-2½

*Bembidium concolor*, *Brullé*, in *Webb et Berth* (Col) 58 (1838)

*Habitat* (ut credo) insulas omnes Canarienses, certe in Lanzarota, Canaria, Teneriffa, Gomera, Palma et Hierro,—sub lapidibus per margines aquarum (vel stagnantium vel fluentium) necnon ad rupes aquosas, haud infrequens

This interesting *Bembidium*, so remarkable as a *Lopha* for its immaculate elytra\*, is in all probability universal throughout the archipelago, for although it has not hitherto been observed in Fuerteventura, there can be no doubt that it must exist in that island likewise. I have captured it in Lanzarote, Grand Canary, Teneriffe, Palma, and Hierro (in the first of which it was taken also by Mr Gray), and it was met with by Dr Crotch at Hermigua, in Gomera

#### 109 *Bembidium subcallosum*, n. sp.

*B. atrum* (vix subcyanescens), prothorace cordato, angulis posterioribus subiectis, basi grosse punctato, elytris subparallelo-oblongis, grosse marginatis, maculis duabus testaceis utrinque ornatis, antice striato-punctatis, pone basin profunde transversim impressis, antennis ad basin ipsissimam pedibusque piceis, tibiis interdum paulo dilutioribus — Long corp lin 1½-2

*Bembidium* 4-guttatum, *Brulle* [nec *Fab*], in *Webb et Berth* (Col) 58 (1838)

*Habitat* insulas omnes Canarienses, Lanzarota et Fuerteventura (nisi fallor) solis exceptis, in humidis necnon per margines rivulorum vulgare

Closely allied to the European *B. callosum*, from which however it differs in its larger size, altogether broader outline, and darker (almost unmetallic) surface, in its prothorax being rather more densely and coarsely punctured along the base, in its elytra being a trifle more oblong (or less oblong-ovate), with the patch on the anterior disk of each both shorter and less marginal (and therefore very much more widely separated from the anterior one), and in its legs

\* M. Brullé, in his short notice (I cannot call it "description") of this insect, remarks that it is "distinct du 4-guttatum par l'absence de taches sur les élytres et par la présence de deux points enfoncés sur chacun de ces deux organes". The two discal impressions to which he refers exist in all the allied species (*4-guttatum*, *callosum*, *subcallosum*, *Schmidtii*, &c), only they happen, from its superior size, to be a little more evident in the *B. concolor*. He then speaks of the femora only as rufescent ("avec les cuisses d'un roux fauve"), whereas the entire legs are invariably of that colour. It is most unfortunate that in such a well-defined and indeed almost anomalous species he could not call attention to so few as even four of its numerous characteristics without being absolutely incorrect in two of them.

being considerably more piccous. It is perhaps still nearer to the Madeiran *B. Schmidtii*, and is in many respects intermediate between that insect and the *callosum*,—agreeing better with the former in its size, outline and colour, and with the latter in its sculpture, nevertheless its still blacker and less ænescent (or obscurely subcæneous) hue, in conjunction with the *finer* and *shorter* striæ, and the smaller anterior patch, of its (more deeply transversely-impressed) elytra, will, I think, sufficiently distinguish it even from the *B. Schmidtii*.\*

The *B. subcallosum* is a most abundant insect, in wet spots, throughout the Canarian archipelago—except in the eastern portion of it, where it has not yet been observed. I have myself taken it in all the islands of the Group except Lanzarote and Fuerteventura. In Gomera it was captured likewise by Mr Gray, in Teneriffe by the Barão do Castello de Paiva, and in *both* of those islands by Dr Crotch.

#### 110 *Bembidium inconspicuum*, n. sp.

*B.* subvirescenti-nigrum, prothorace cordato, angulis ipsissimis positæ subiectis, per basin parvissime punctato, elytris subparallelo-oblongis, tenuiter marginatis, maculis duabus testaceis utrinque ornatis, profunde striato-punctatis, stris postice evanescentibus, antennis pedibusque testaceis, illis versus apicem femoribusque fusciscentioribus.—Long. corp. lin. 1½.

*Habitat* Teneriffam, a Dom W. D. Crotch nuper repertum.

A single example of this little *Bembidium* was captured in Teneriffe, during the spring of 1862, by Dr Crotch,—who has kindly presented it to the collection at the British Museum. It is somewhat allied to the common European *B. 4-maculatum*, but is smaller, with its extreme hinder prothoracic angles rather less evidently denticulated, with its elytra *much* more deeply striate-punctate, and with its limbs shorter—the antennal joints especially being more abbreviated.

(Subgenus *Leja*, *Meg*.)

#### 111 *Bembidium lætum*

*B.* capite prothoraceque ænescenti-cupreis, latera versus interdum virescentibus, illo utrinque punctato et longitudinaliter stiguloso,

\* The Madeiran *B. Schmidtii* differs from the European *callosum* in being rather larger, and *altogether* broader and darker, in having the puncture between the base of each of its frontal sulci (which are themselves a little different) and the eye coarser, in its prothorax being somewhat more thickly and roughly punctured behind, with a more evident tendency to be obsoletely punctured in the centre in front, and with its basal foveæ a trifle less sharply defined, in its elytral striæ being very much deeper, more coarsely punctured, and continued to a greater distance posteriorly, and in its legs being more robust, with the claws longer.

hòc subcordato, antice et postice parce punctulato, clytris læte viridibus, ad apicem pallidis, per suturiam latissime cupreo-micantibus, utrinque fasciis duabus transversis cupreo-micantibus ornatis necnon punctis duobus maximis notatis, leviter punctulato-striatis, antennis nigro-piceis, pedibus testaceis — Long corp lin  $1\frac{1}{2}$ –2

*Bembidium lætum*, Brulle, in Webb et Berth (Col) 58 pl n f 9 (1838)  
 ———, Hartung, Geolog Verhältn Lanz und Fuert 141

*Habitat* in Lanzarota, Fuerteventura et Teneriffa, per margines rivulorum, rarissimum

This beautiful *Bembidium* (the most elegant of all the Canarian Coleoptera) is apparently extremely rare, though widely spread over the archipelago I have taken it by the edges of the little stream at Hama, in the north of Lanzarote, in a similar position at La Antigua, in Fuerteventura, and close to Ycod de los Vinhos, of Teneriffe, in which last island it was likewise captured by Mr Gray (in the Barranco Santo, near St<sup>a</sup> Cruz), and more abundantly by Dr Crotch (above Ycod el Alto) It was also found by M Hartung in Fuerteventura And I am informed by Dr Schaum that it was taken by Kiesenwetter at Nauplia, in Greece, but I have not had the opportunity of comparing a Grecian type with the Canarian ones

(Subgenus *Bembidium* Auct)

112 *Bembidium* Crotchii, n sp

*B* capite prothoraceque submetallice fusco-piceis, subopacis, illo parce punctato, hòc cordato fere impunctato sed ad basin transversim constricto subrugoso, elytris nitidioribus, testaceis, circa scutellum triangulariter submaculatis necnon in disco postico obsoletissime (vix perspicue) dentato-subfasciatis, punctato-striatis, stris postice evanescentibus, antennis (breviusculis), palpis pedibusque rufo-testaceis — Long corp lin 2–2 $\frac{1}{4}$

*Habitat* Palmam, rarissime, mihi non obvium, a Dom W D Crotch, Medic. Doct, in humidis supra Sanctam Crucem nuper repertum Species valde distincta formosa indigena, necnon in honorem captatoris indefessi oculatissimi a meipso citata

This most interesting *Bembidium*, the discovery of which (in the island of Palma) is due to the indefatigable researches of Dr Crotch, is clearly the representative at the Canaries of the European *B pallidipenne*,—though at the same time most abundantly distinct from it specifically It may at once be known from it by its almost opaque, brownish-piceous head and prothorax (which are but faintly metallic, and both of which, though particularly the latter, are less evidently punctuated), and by its (pale rufo-testaceous) elytra having their scutellary blotch and dentate postmedial fascia nearly obsolete The

only three examples which I have seen, Dr Crotch informs me that he captured in a wet and nearly inaccessible spot at the edges of a Levada on the mountain-slopes above S<sup>ra</sup> Cruz, of Palma, during the spring of 1862

(Subgenus *Notaphus*, *Meg*)

113 *Bembidium marginicolle*, n. sp.

*B. inter flammulatum* Clairv. et *varium* Oliv. aliquo modo situm, cum illo colore et facie generali sed cum hęc staturā et sculpturā melius congruens, fortasse hujus varietas geographica, capite prothoracque lætius metallicis, hęc (præsertim postice) grossius marginato, angulis ipsissimis basalibus paulo magis prominulis, elytris (testaceo-pictis) pedibusque sensim pallidioribus—Long corp. lin 2½

*Habitat* Teneriffam, specimina duo nuper detexit cl W D Crotch

Whether the two examples from which the above diagnosis has been compiled are indicative of more than a geographical phasis of the common European *B. varium* I will not undertake, in the absence of further material, to pronounce for certain. They would seem in some respects indeed to be intermediate between that species and the *flammulatum*—being nearer perhaps to the latter in their paler hue, but to the former in their general sculpture and somewhat smaller size. Their head and prothorax however are rather more brightly metallic than is usually the case with the *B. varium*, and the latter is more strongly margined at the edges and has its extreme posterior angles a trifle more acutely prominent. They were both of them captured in Teneriffe (I believe above Ycod el Alto), during the spring of 1862, by Dr Crotch,—to whose careful researches we are indebted for several recent additions to the Canarian fauna.

## Fam. 2. DYTISCIDÆ.

### Genus 39 HALIPLUS

Latreille, *Gen. Crust. et Ins.* 1: 234 (1806)

#### 114 *Halplus suffusus*.

*H. oblongus*, capite nigro-piceo, latiusculo, punctato, prothoraceo testaceo, antice, postice in medio, necnon in disco nigrescente, basali lato (elytrorum basin paulo superante), ad latera oblique subrecto, in medio profunde punctato, postice utrinque lineā curvātā abbreviatā notato, coleopteris testaceis, (præsertim pone discum) nigro-suffusis, antice subparallelis, punctato-striatis, intersitis parce punctatis, antennis pedibusque testaceis—Long corp. lin 1½–1½

*Halplus suffusus*, Woll, *Ann. Nat. Hist.* (3rd series) vi: 216 (1863)

*Habitat* in aquis Canariæ et Gomeræ, hinc inde parum vulgaris

Before closely examining this *Halypus* I had regarded it as identical with the common European *H. lineatocollis*, to which in general colouring and aspect it is very nearly allied. Considering, however, the smallness of the characters which constitute specific ones in the Hydradephaga, I am satisfied that it cannot be referred to that insect, and such is likewise the opinion of Dr Schaum. It is not only slightly larger, wider, and more oblong (the head, thorax, and elytra being *each* of them relatively broader, and the entire outline somewhat more parallel), but the blacker portions of its surface are more developed and suffused, and the punctures of its striæ are smaller and more numerous,—whilst (on the contrary) those of its prothorax are perhaps coarser. This last, also, is of a slightly different shape,—being less narrowed anteriorly, rather less obliquely-straightened at the sides, and perceptibly wider behind (where it exceeds in breadth the *extreme* base of the elytra), and with its two curved foveæ deeper. The only islands in which I have observed it hitherto are Grand Canary and Gomera, in the latter of which it was taken abundantly by Mr Gray and myself, in the valley of San Sebastian, during February 1858, and subsequently by Dr Clotch near Heimigua, whilst, in March and April of the same year, I found it in the district of El Monte of the former.

#### Genus 40 **HYDROPORUS**

Clairville, *Ent. Helv.* 11 183 (1806)

##### 115 **Hydroporus musicus.**

*Hydroporus musicus*, Klug, *Symb. Phys.* pl. 33 f. 12 (1829)

— — —, Aube, *Hydrocanth.* 475 (1838)

*Habitat* in aquis Canariæ Grandis, rarissimus

The only island in which I have hitherto observed this *Hydroporus* is Grand Canary, where, however, it appears to be scarce. I possess examples taken by Dr Schaum in Egypt, but the Canarian ones are a trifle rounder and more convex, as also of a somewhat less pallid hue.

##### 116 **Hydroporus confluens.**

*Dytiscus confluens*, Fab., *Ent. Syst.* 1 198 (1792)

*Hydroporus confluens*, Aube, *Hydrocanth.* 557 (1838)

— — —, Woll., *Ins. Mad.* 87 (1854)

— — —, Id., *Cat. Mad. Col.* 27 (1857)

*Habitat* in Fuerteventura et Gomera, minus frequens

This insect, which occurs throughout Europe and the north of Africa, and which is universal at the Madenas, appears to be some-

what scarce in these islands,—the only district in which I have myself captured it being the Rio Palmas of Fuerteventura. It has however, more recently, been taken, by Dr Crotch, near Hermigua, in Gomera.

### 117 *Hydroporus geminus*.

*Dytiscus geminus*, *Fab*, *Ent Syst* 1 199 (1792)

*Hydroporus geminus*, *Steph*, *Ill Brit Ent* 11 57 (1829)

— —, *Aube*, *Hydrocanth* 491 (1838)

*Habitat* Fuerteventuram, in cisternâ quadam ad Rio Palmas captus

The Canarian specimens of this common European *Hydroporus* are a trifle smaller and less pubescent than the ordinary ones of more northern latitudes, and their elytra are paler,—the dark portion which usually occupies almost the entire surface being so reduced in dimensions as to take the form of a large, postmedial, dentate fascia but there is no character, that I can detect, to warrant its separation from the *H geminus*. And I may further add that it was regarded as conspecific with that insect by Dr Schaum. It appears to be very rare in these islands, the only spot in which I have hitherto observed it being the Rio Palmas of Fuerteventura,—where, during April 1859, I captured eight specimens from out of an old water-tank.

### 118 *Hydroporus minutissimus*.

*Hydroporus minutissimus*, *Germ*, *Ins Spec Nov* 31 (1824)

— —, *Aube*, *Hydrocanth* 493 (1838)

— trifasciatus, *Woll*, *Ann Nat Hist* xviii 453 pl 9 f 3 (1846)

*Habitat* in aquis Canariæ, Teneriffæ, Gomeræ et Palmæ, minus frequens.

The *H minutissimus* of central and (more particularly) southern Europe appears to occur sparingly in these islands. I have taken it in the district of El Monte in Grand Canary, in the Barranco Santo (near Sta Cruz) of Teneriffe, and in the Barranco de San Juan (near the Souces) of Palma, and it was captured by Dr Crotch near Hermigua, in Gomera.

### 119 *Hydroporus delectus*, n sp

*H oblongus*, minute punctulatus, tenuiter pubescens, niger, prothorace ad latera dilute testaceo et oblique subiecto, elytris utrinque lineis tribus latis interruptis testaceis postice valde abbreviatis ornatis, antennis ad basin pedibusque piceo-testaceis.—Long corp lin 1-1½

*Habitat* in Teneriffæ aquis, rarissimus

Very closely allied to the European *H flavipes*, but I think nevertheless really distinct. It is a little smaller, narrower, and more ob-

long (being a trifle wider *relatively* in front) than that insect, its prothorax is less rounded at the sides, its elytra have their pale lines much shorter (or less developed), with their margin concolorous, and its antennæ are somewhat longer. I have taken it only in Teneriffe,—namely, in the Barranco Santo (near S<sup>n</sup> Cruz) and at Las Mercedes, and it was also met with by Dr Crotch in the same island.

#### 120 *Hydroporus xanthopus*

*Hydroporus xanthopus*, *Steph, Ill Brit Ent* v 393 (1832)

— *lituatus*, *Aube, Hydriocanth* 589 (1838)

*Habitat* in aquis Teneriffæ, usque ad 8000' s m ascendens

The present *Hydroporus* differs a little from its representatives of more northern latitudes,—being a trifle larger, darker, and more oblong than the ordinary European *H xanthopus*, but it agrees with it so nearly in all other respects that I cannot believe that it should be regarded as more than a geographical state of that insect and such (from the examination, however, of but a single specimen), I may add, was the opinion of Dr Schaum. It is rather common in Teneriffe (where it was likewise captured by Dr Crotch) at intermediate and lofty elevations. I have taken it at Las Mercedes, the Agua Garcia, Ycod el Alto, and by a small spring on the Cumbre adjoining the Cañadas—upwards of 8000 feet above the sea.

#### 121 *Hydroporus planus*

*Dytiscus planus*, *Fab, Ent Syst* i 195 (1792)

*Hydroporus holosericeus*, *Steph, Ill Brit Ent* ii 61 (1829)

— *planus*, *Aube, Hydriocanth* 583 (1838)

*Habitat* in Teneriffæ aquis, in rivulo ad Agua Garcia vulgaris

As in the *H xanthopus*, the Canarian examples of this common European insect are, on the average, a trifle larger, blacker, and more convex, as also rather less pubescent, than the ordinary ones of more northern latitudes, but there is nothing about them, that I can perceive, to justify the idea that they are specifically distinct from the *H planus*. I have taken it abundantly at the Agua Garcia, in Teneriffe, but have not yet observed it in any of the other islands. It was likewise captured in Teneriffe by Dr Crotch.

#### 122 *Hydroporus Clarkii*

*Hydroporus Clarkii*, *Woll, Ann Nat Hist* (3rd series) ix 438 [June] (1862)

— *Andalusæ*, *Clark, Journ of Ent* i 469 [September] (1862)

*Habitat* in aquis Fuerteventuræ, vulgaris

In its general aspect and colouring, as well as in the minute spine

towards the apex of each of its elytra, the present *Hydroporus*, although abundantly distinct therefrom, is somewhat allied to the European *H. assimilis*, Payk (= *fiater*, Aubé). It is however rather larger, paler, and less ovate than that insect, its prothorax is relatively narrower, proportionally a little shorter, more *equally* rounded at the sides, rather more produced in the centre behind, and with its basal patches more transverse and but seldom suffused into the blackened posterior margin, and its elytra are less convex, more straightened laterally, and with their darker lines very much more broken and anteriorly abbreviated. It appears to be closely related to the *H. affinis*, Aubé, from Sardinia, nevertheless I am assured by Dr Schaum that he considers it truly distinct from that species (of which he has lately examined "several authenticated specimens"). It was taken abundantly by Mr Gray and myself at La Antigua in Fuerteventura, during January 1858, and during April of the following year I met with it, in still greater profusion, in the Rio Palmas of the same island. It occurs also in the south of Spain, having been captured at Malaga, by Messrs Gray and Clark, in May of 1856. The Spanish examples are a trifle smaller than the Canarian ones.

### 123 *Hydroporus Ceresyi*.

*H. oblongus*, subconvexus, supra testaceus, subtiliter pubescens, prothorace æquali, ad latera oblique subrecto, postice in medio producto necnon utrinque maculâ parvâ indistinctâ suffusâ ornato, elytris subparallelis, pallide testaceis, lineis nigris plus minus integris ornatis—Long corp. lin  $1\frac{3}{4}$ –2

*Hydroporus Ceresyi*, *Aube*, *Hydrocanth* 543 (1838)

*Habitat* Lanzarotam, in lacu illo salino "Januvio" dicto captus

I do not hesitate to refer this *Hydroporus* to the *H. Ceresyi* of southern Europe, even though the Canarian examples now before me do not *perfectly* accord with types in my collection from Cete and the south of France, for their discrepancies *inter se* are so slight as to be but just appreciable, and moreover it is the opinion of Dr Schaum that they cannot be treated as distinct. Nevertheless it appears to me that the prothorax of the Lanzarotan individuals is *a trifle* wider (being *quite* as broad behind as the base of the elytra) and perhaps a little more rounded at the edges, and also that their elytra (the testaceous portions of which are usually of a darker or more rufescent hue) are somewhat straighter at the sides—causing the entire insect to seem, if anything, rather more oblong. However, I do not believe that they can be regarded, at the utmost, as more

than a geographical state of the *Ceresyr*. If however they should prove eventually to be different, I would then (having already given a *diagnosis*) propose for them the specific name of *peisumilis*. The only examples of it which I have yet seen from these islands were captured by myself in the brackish lake of Januvio, towards the south-west of Lanzarote, during my visit to that remote spot, in company with the Rev R T Lowe, in March 1859.

#### 124 *Hydroporus tessellatus*

*Hydroporus tessellatus* (*Dej*), *Aube*, *Hydrocanth* 516 (1838)

*Habitat* in rivulis Canariæ, Teneriffæ, Gomeræ et Palmæ, vulgaris

I have but little doubt that the present *Hydroporus* is the *tessellatus* of Aubé, described from a single example in Dejean's collection. Nevertheless there are at least two important characters omitted in Dr Aubé's diagnosis,—which however, since they are both of them somewhat variable, is not surprising, considering, too, that he had but a solitary individual to judge from. I refer to its minutely *pubescent* surface, and its slight tendency to be very obscurely subdentate (more or less expressed in different specimens) towards the apex of its elytra. It is nearly allied, in general contour and affinity, to the Madeiran *H. vigilans*, but differs from it in being on the average a little larger and more oblong, in its surface being delicately pubescent, in its head and prothorax being darker (with the latter much less rounded at the sides and having the posterior angles less obtuse), and in its elytral lines (which are sometimes almost obsolete) being less developed. The *H. tessellatus* is an abundant insect in nearly all the streams of Grand Canary, Teneriffe, Gomera, and Palma, occurring independently of elevation. In Gomera it was likewise taken by Mr Gray and Dr Crotch (the latter of whom met with it also in Teneriffe and Palma).

#### Genus 41 **LACCOPHILUS**

Leach, *Zool. Miscell.* iii 69 (1817)

#### 125 *Laccophilus inflatus*, n. sp.

*L. lato-ellipticus*, convexus, capite prothoraceque dilute rufo-testaceis, illo latiusculo, hoc postice in medio breviter producto, elytris subolivaceo-fuscis, per limbum plus minus pellucidis, maculis irregularibus indistinctis obliquis ad marginem pallido-ornatis, antennis palpisque pallido-testaceis, pedibus piceo-testaceis.—Long corp. lin.  $2-2\frac{1}{4}$

*Habitat* in aquis Canariæ, Teneriffæ et Gomeræ, hinc inde haud infrequens

The present *Laccophilus* differs both from the *minutus* and *hyalinus* of more northern latitudes in its larger size, as well as in its wider, more elliptic, and convexer body. As regards its colouring, the head and prothorax (the latter of which is but slightly produced in the centre behind) are of a more or less diluted rufo-testaceous hue, whilst the elytra are of a dark olivaceous brown, with the ordinary oblique patches arising out of the subpellucid margin but faintly expressed. It was taken by Mr Gray and myself in the valley of San Sebastian of Gomera, during February 1858, and by myself, during the following April, at El Monte, Teior, and Argunigum, in Grand Canary. I have also received it from Dr Heer, taken by M. Hartung in Teneriffe.

#### Genus 42 COLYMBETES

Clauville, *Ent Helv* ii 198 (1806)

#### 126 Colymbetes coriaceus.

*Dytiscus coriaceus*, *Hoffm in litt*

*Meladema coriacea*, *Laporte, Etud Ent* 98 (1834)

*Colymbetes coriaceus*, *Aubé, Hydrocanth* 220 (1838)

*Dytiscus coriaceus*, *Brulle, in Webb et Berth (Col)* 58 (1838)

*Habitat* in aquis quietis Canariæ et Teneriffæ, sat frequens

The *C coriaceus*, found in the south of Europe and the north of Africa (and which is represented at Madena by the *C lano*), occurs sparingly at the Canaries. I once however took it in tolerable abundance at the head of the Baranco Santo, near St<sup>a</sup> Cruz, of Teneriffe, as also in the large pools at El Charco,—the sandy region adjoining Maspalomas, in the extreme south of Grand Canary. From Teneriffe it has likewise been communicated by the Barão do Castello de Parva, in which island it was also captured by M Hartung and Dr Crotch.

#### Genus 43 AGABUS

Leach, *Zool Miscell* iii 69, 72 (1817)

#### 127 Agabus nebulosus

*Dytiscus nebulosus*, *Forst, Nov Spec Ins* 56 (1771)

— *bipunctatus*, *Fab, Mant Ins* 190 (1787)

*Agabus nebulosus*, *Aubé, Hydrocanth* 328 (1838)

*Colymbetes bipunctatus*, *Brulle, in Webb et Berth (Col)* 58 (1838)

*Agabus nebulosus*, *Woll, Ins Mus* 84 (1854)

— —, *Id, Cat Mus Col* 25 (1857)

*Habitat* Canariam et Teneriffam, in aquis, passim

The common European *A nebulosus* appears to be local in these islands, the only spots in which I have hitherto observed it being near Tafira in Grand Canary and at Las Mercedes in Teneriffe,—in

the latter of which it was also met with by Dr Crotch (near Realejo) The same state which is typical at Madena, but which is usually aberrant in more northern latitudes, namely that in which the prothorax is immaculate, obtains equally at the Canaries, for out of 17 examples which I have just examined, *four only* have any indications of the two darker patches on the disc

### 128 *Agabus biguttatus*.

*A* ovalis, convexus, niger, subtilissime alutaceus, capite postice obscure bimaculato, prothorace brevi, ad latera oblique subrecto, in disco canaliculâ valde abbreviatâ foveæformi notato, postice subsinuato, elytrorum utroque maculâ indistinctâ paulo ultra medium ad latera ornato [alterâ ad apicem obsoletâ] necnon seriebus punctorum tribus impresso, palpis pedibusque piceis, illis ad apicem, antennis, tasis genibusque læte ferrugineis

*Mas* nitidissimus, tasis anterioribus ad basin leviter dilatatis

*Fœm* nitidus — Long corp lin  $3\frac{3}{4}$ —4

*Dytiscus biguttatus*, *Oliv*, *Ent* iii 40 26 pl 4 f 36 (1795)

*Agabus biguttatus*, *Aube*, *Hydrocanth* 341 (1838)

*Colymbetes biguttatus*?, *Brulle*, in *Webb et Berth* (Col) 58 (1838)

*Habitat* Canariam Grandem, in regione El Monte captus

Judging from Dr Aubé's excellent description, I have but little doubt that this *Agabus* is the *biguttatus* of Olivier (from Italy, Sicily, Spain, the south of France, &c),—its dark, convex, oval and shining body, no less than its *almost* unalutaceous surface, and the ferruginous hue of its *knees* and feet, being points to which he particularly calls attention, whilst the fact that the *biguttatus* is recorded by M Brullé, in his short list of Canarian Coleoptera, would render this supposition the more probable At the same time I must admit that it is far more *likely* that the following species (which abounds in Tenerife) was the one included in MM Webb and Berthelot's very meagre collection, in which case the "*Colymbetes biguttatus*" of Brullé's catalogue would refer to that insect rather than to the present one Be this however as it may, I believe that the *Agabus* now under consideration is strictly identical with the *biguttatus* of Aubé's Monograph It appears to be rare at the Canaries, the only three specimens which I have seen having been captured by myself in the region of El Monte in Grand Canary during the spring of 1858

### 129 *Agabus consanguineus*, n sp

*A* præcedenti affinis, sed paulo oblongior (i e ad latera vix minus rotundatus), minus convexus, minus nitidus (in sexu fœmineo etiam subopacus), prothoracis angulis posticis vix magis rectis, scutello vix minore et magis triangulari (ad apicem subacutiore), antennis

pedibusque paulo obscurioribus, genibus fere concoloribus, tarsis anterioribus masculis ad basin paulo magis dilatatis necnon tibus anticis paulo angustioribus

*Var*  $\beta$  [an species?] Paulo minor, vix picescentior ovatior depressior, in sexu femineo subopacior, antennis pedibusque plerumque rufescentioribus—Long corp  $ln\ 3\frac{1}{2}$ —vix 4

*Habitat* in aquis Teneriffæ et Palmæ, sat vulgaris

Had it not been that Dr Aubé regards the *A dilatatus* (described in his Monograph) as a probable variety of the common European *guttatus*, I should have been inclined to refer the present *Agabus* to that species. But being satisfied that it cannot be considered as any form, or state, of the *guttatus*, I am induced to lay greater stress than I should otherwise have done on the few points of dissimilarity which would appear to separate it from the one indicated in his diagnosis. Thus, there is no appearance of the piceous hue, on which he lays particular stress, and the reticulations of its surface (even in the male sex) seem to be more coarse. Whether it be the *dilatatus*, however, or not, I may add that it differs from the *guttatus* in its rather larger size and anteriorly broader outline, in its more finely alutaceous (or “reticulated”) surface, in its prothorax being wider in front, a little more rounded at the sides and with the hinder angles more obtuse, in its three series of discal punctures being larger (with the minute sutural ones evanescent), in its limbs being duller (or more piceous), and in its whole body (particularly of the females) being somewhat less shining. From the *A biguttatus* (just described) its rather more oblong (or less rounded) outline, less convex body and less polished surface, in conjunction with its rather smaller and more triangular scutellum, its rather darker and subconcolorous limbs, its rather narrower fore tibiæ and not quite so broadly dilated anterior male-feet, will at once remove it.

The “var  $\beta$ ” may possibly be distinct, nevertheless as I cannot detect a character in it of sufficient importance to warrant its separation, I have thought it safer not to treat it as such. It is on the average a little smaller and more ovate than the type, just perceptibly more picescent, and perhaps if anything a trifle less convex. Its limbs also are a shade paler and its female sex somewhat more opaque.

The *A consanguineus* (which has likewise been communicated by Dr Crotch and the Barão do Castello de Parva) is a common insect throughout the intermediate elevations of Teneriffæ, being chiefly abundant in the streams and pools of the sylvan districts,—such as at the Agua Garcia, Las Mercedes, &c, and I have also taken it,

sparingly, in Palma The "var  $\beta$ " I have only observed at a somewhat higher elevation,—having obtained eleven examples of it in the ravines of the lofty Pinal above Ycod el Alto, during May 1859

#### Genus 44 **CYBISTER.**

Curtis, *Brit Ent* iv 151 (1827)

##### 130 **Cybister africanus**

*Cybister africanus*, Laporte, *Etud Ent* 99 (1834)

*Tiochalus meridionalis*, Gene, *De quib Ins Sard* 1 10 (1836)

*Cybister africanus*, Aube, *Hydrocanth* 71 (1838)

*Habitat* Canariam Grandem, in aquis quietis ad Arguuniguin mense April A D 1858 deprehensus

The *C africanus*, of southern Europe and northern Africa, appears to be both local and scarce in these islands,—the only spot in which I have observed it hitherto being at Arguuniguin, in the south of Grand Canary, where, on the 14th of April 1858, I captured several specimens of it in the pools, or small freshwater lakes, close to the sea

#### Genus 45 **DYTISCUS**

Linnaeus, *Syst Nat* ii 664 (1767)

##### 131 **Dytiscus circumflexus**

*Dytiscus circumflexus*, Fab, *Syst Eleu* 1 258 (1801)

—, Aube, *Hydrocanth* 113 (1838)

*Dytiscus circumflexus*, Brulle, in *Webb et Berth* (Col) 58 (1838)

*Habitat* ?

The European *D circumflexus* (which is recorded also from Algeria and Barbary) is admitted as Canarian by M. Brullé, on the evidence of examples assumed to have been captured by Messrs Webb and Berthelot I have not myself met with it in these islands, but since there is no reason why it should not occur there, and since I have examined the specimens of Messrs Webb and Berthelot, in Paris, which appeared to be correctly identified, I think perhaps that the insect should be included in our present fauna Nevertheless I cannot but feel a slight hesitation in admitting it, seeing that several of the very few species supposed to have been collected by Messrs Webb and Berthelot leave a doubt on my mind as to whether or not they were really obtained at the Canaries at all As to the precise island in which the specimens were professedly found, M Brullé, of course, gives us no information

Genus 46 **EUNETES**Erichson, *Gen Dytic* 23 (1832)132 **Eunectes subdiaphanus.***Eunectes subdiaphanus*, *Woll, Ann Nat Hist*, 3d series, viii 100 (1861)*Habitat* Canariam Grandem, in aquis quietis ad El Charco repertus

This fine *Eunectes*, the distinctive characters of which are fully pointed out in my diagnosis above referred to, was taken by myself in the pools at El Charco, in the extreme south of Grand Canary, during my visit to that remote spot, with the Rev R T Lowe, on the 13th of April 1858.

**Fam. 3. GYRINIDÆ.**Genus 47 **GYRINUS**Geoffroy, *Hist Abr des Ins* 1. 193 (1762)133 **Gyrinus striatus.***Gyrinus striatus*, *Fab, Ent Syst* 1 203 (1792)—— *strigosus*, *Aube, Hyd, ocanth* 719 (1838)—— *striatus*, *Brulle, in Webb et Berth (Col)* 58 (1838)*Habitat* in aquis Canariæ et Teneriffæ, haud infrequens

The *G. striatus* (remarkable, *inter alia*, for the deep and pale stræ of its elytra, greatly raised outer interstices, distinctly punctulated surface, and yellow margin) is tolerably common at the Canaries, though somewhat local. I have taken it in profusion, however, in the pools at El Charco, in the south of Grand Canary, as also at the Agua Mansa, &c, of Teneriffe. From the latter island it has likewise been communicated (together with the following two species) by the Barão do Castello de Paiva. It occurs throughout central and southern Europe and the north of Africa, and has been recorded even from Madagascar, the Isle of France, and New Holland.

134 **Gyrinus urinator***Gyrinus urinator*, *Illig, Mag für Ins* vi 299 (1807)—— *lineatus*, *Steph, Ill Brit Ent* ii 97 pl viii f 2 (1829)—— *urnator*, *Aube, Hyd, ocanth* 704 (1838)—— —, *Brulle, in Webb et Berth (Col)* 58 (1838)*Habitat* in aquis Canariæ, Teneriffæ et Gomeræ, sat vulgaris

The rather broad and somewhat obovate outline of this *Gyrinus*, in conjunction with its very highly polished and dark (though obscurely subcyaneous and laterally aenescent) surface, its dull whitish-

metallic elytral striæ (the subsutural ones of which are scarcely perceptibly impressed), and the ferruginous hue of its body beneath, will readily distinguish it. I have taken it in Grand Canary, near S<sup>ta</sup> Cruz and Orotava, in Teneriffe, and, during February 1858, it was captured by Mr Gray and myself in the valley above San Sebastian, of Gomeia,—from which locality it was subsequently obtained by Dr Crotch. I have also received it from Professor Heer (collected by M Hartung in Teneriffe) under the name of "*G. nator*," from which however it is totally distinct.

### 135 *Gyrinus Dejeani*

*Gyrinus Dejeani*, *Brullé, Exp scient en Moree*, iii (1<sup>re</sup> part) 128  
 — æneus, *Aube* [nec *Steph*], *Hydrocanth* 690 (1838)

*Habitat* in Canaria et Teneriffa, hinc inde vulgaris

The rather smaller size and narrower outline of the present *Gyrinus*, combined with its more deeply punctured striæ (which are concolorous with the rest of the surface), its more straightly truncated elytra, and the darker hue of its body beneath, will, apart from minor differences, at once separate it from the last species. It closely resembles the common *G. nator*, but is a trifle more oblong, with its striæ more coarsely punctured, with its elytra more straightly truncated at their apex, and with its reflexed margin dark-æneous (instead of ferruginous). It is common throughout central and southern Europe, and appears to be likewise common in these islands. I have taken it abundantly at Arguineguin, in the south of Grand Canary, as also near S<sup>ta</sup> Cruz, Souzal, and Orotava, in Teneriffe.

## Fam. 4. PARNIDÆ.

### Genus 48 PARNUS

Fabricius, *Ent Syst* i 245 (1792)

### 136 *Parnus prolifericornis*

*Parnus prolifericornis*, *Fab, Ent Syst* i 245 (1792)  
 — —, *Gyll, Ins Suec* i 139 (1808)  
 — —, *Woll, Ins Mad* 90 (1854)  
 — —, *Id, Cat Mad Col* 28 (1857)

*Habitat* in aquis Canariæ, Teneriffæ, Gomeiæ et Palmæ, sat vulgaris

The common European *P. prolifericornis*, which is universal at Madeira and which is recorded by M Morelet at the Azores, occurs rather abundantly in wet spots at the Canaries. Hitherto, however,

I have myself observed it only in Grand Canary, Teneriffe, and Palma, but it was captured by Dr Crotch near Hermigua, in Gomera

## Fam. 5. HELOPHORIDÆ.

### Genus 49 HELOPHORUS.

FABRICIUS, *Syst Eleu* 1 277 (1801)

#### 137 *Helophorus longitarsis*, n sp

*H* elongato-ovatus, antice attenuatus, capite prothoraceque cupreis, minutissime et parce punctulatis, hôc 5-sulcato, sulcis lateralibus internis flexuosis, oculis magnis, prominentibus, elytris testaceis, inæqualiter griseo-nebulosis, punctato-striatis, stria angustis, interstitiis latiusculis subdepressis distincte uniseriatim punctulatis, antennis, palpis pedibusque pallide testaceis, his (præsertim tarsiis) elongatis—Long corp in vix  $1\frac{1}{2}$

*Habitat* Fuerteventuram, in cisternâ quadam ad Rio Palmas semel captus

This very distinct *Helophorus* may be at once known from all the European species with which I am acquainted by its anteriorly attenuated outline, narrow striæ, and the comparatively great length of its very pallid limbs,—especially however of the feet Its head and prothorax are of a reddish-coppery hue, its eyes are large and prominent, and its elytra are testaceous, obscurely clouded in parts, and with their interstices (which have a very evident row of small punctures down each) rather wide and subdepressed The only specimen of it which I have seen was captured by myself out of a tank in the Rio Palmas of Fuerteventura, during April 1859

### Genus 50 OCHTHEBIUS

Leach, *Zool Miscell* iii 91 (1817)

#### 138 *Ochthebius 4-foveolatus*

*Ochthebius 4-foveolatus*, Woll, *Ins Mad* 91 (1854)

—, *Id*, *Cat Mad Col* 28 (1857)

*Habitat* in Fuerteventura, Canaria, Teneriffa, Gomera et Palma, haud infrequens

The present *Ochthebius*, which is common in Madeira and Porto Santo, is widely spread over the Canarian archipelago I have taken it in (the Rio Palmas and at La Antigua of) Fuerteventura, (in the region of El Monte of) Grand Canary, (at S<sup>ta</sup> Cruz, the Agua Garcia, &c, of) Teneriffe, and (in the Barranco de San Juan of)

Palma It was also captured in Gomera (near San Sebastian) by Mr Gray and (at Hermigua) by Dr Crotch

### 139 *Ochthebius pygmæus*.

*Elophoius pygmæus*, *Fab, Ent Syst* 1 205 (1792)

*Ochthebius pygmæus*, *Steph, Ill Brit Ent* 11 115 (1829)

—— *iparius*, *Sturm, Deutsch Ent*, v 59 tab 222 f a A (1836)

—— *pygmæus*, *Erich, Kaf der Murb Brand* 1 199 (1837)

*Habitat* in Fuerteventura, Teneriffa et Palma, hinc inde vulgaris

The common European *O pygmæus* is locally abundant at the Canaries I have taken it in (the Rio Palmas of) Fuerteventura, (near St<sup>a</sup> Cruz and Orotava, and at the Agua Garcia of) Teneriffe, and (in the Barranco de San Juan of) Palma

### 140 *Ochthebius lapidicola*, n sp

*O* elongato-ovatus, brunneo-piceus, vix metallescens, subopacus, capite prothoraceque dense punctatus et valde rugulosus, illo triangulari, utrinque late et profunde impresso, hâc canaliculato necnon utrinque juxta canaliculam longitudinaliter bifoveolato, elytris minutissime et parce pubescentibus, profunde et rugose punctato-striatis, pedibus brevibus, robustis, ferrugineis — Long corp lin 1-1½

*Habitat* Teneriffam et Palmam, rarissimus

A very remarkable *Ochthebius*, and well distinguished at first sight by its brownish-piceous, nearly opaque and almost unmetallic surface, by its exceedingly rugose and deeply foveolated head and prothorax (the former of which is triangular, being more *regularly* widened behind than is the case with the *Ochthebi* generally), by its rough and coarsely punctate-striated elytra, and by its short and robust legs It is somewhat allied to the *O rugulosus* from Porto Santo, but totally distinct from it specifically Of the only three specimens which I have seen, two were captured by myself from under small stones at the edges of the little stream (near its junction with the sea) in the Barranco de San Juan, towards the north-west of Palma, on the 28th of May 1858, and the remaining one by Dr Crotch (at Ycod el Alto) in Teneriffe

### Genus 51 **HYDRÆNA**.

Kugelann, in *Schneid Mag* 1 578 (1794)

### 141 *Hydræna sinuaticollis*, n sp

*H senicollis* similis, sed paulo major, (oculo fortissime armato) subtilissime et parvissime pubescens, capite antice distinctius longiore, rostrato, ad apicem sepsim latiore, oculis magis prominentibus, prothorace (haud solum punctato, sed) alutaceo, ad latera minus

serrato sed utrinque magis angulato-sinuato, elytris oblongioribus (minus ovatis), punctato-striatis (nec striato-punctatis), punctis paulo minoribus necnon interstitiis sensim costato-elevationibus, palpis sublongioribus—Long corp ln 1

*Habitat* Teneriffam, a Dom W D Crotch semel tantum lecta

Of the present *Hydræna* I have seen hitherto but a single example, which has been taken recently by Dr Crotch in Teneriffe,—he believes, at Ycod el Alto. It is well distinguished by its (alutaceous, though strongly punctured) prothorax being much sinuated on either side, so as to form almost an angle about the middle, and by its elytral interstices being perceptibly raised, or costate. Its surface, under a high magnifying power, will be seen to be sparingly besprinkled with an extremely minute and scarcely traceable pubescence. In size and outline it is perhaps nearer than even the *H serricollis* to the European *H bicolor*, nevertheless its totally different (laterally-sinuated, alutaceous) prothorax, rather smaller elytral punctures, and more elevated interstices will, apart from minor characters, readily separate it from that insect.

From the *H serricollis* its distinctions have been fully pointed out in the diagnosis, nevertheless I may just mention that its rather larger size and more elongate outline, in conjunction with its somewhat more produced (though apically-broader) head, more prominent eyes, more laterally-sinuated, alutaceous prothorax, less coarsely punctured elytral striæ, more costate interstices, and rather longer palpi, will prevent its being confounded with that species.

#### 142 *Hydræna serricollis*, n. sp.

*H* elongato-ovata, piceo-biunnea, subnitida, capite prothoraceque profunde et rugose punctatis, illo nigrescente, hoc inæquali, in medio dilatato, postice sat constricto, ad latera (oculo armato) distincte serrato, elytris ovatis, profunde striato-punctatis (punctis maximis), antennis ad basin, palpis pedibusque rufo-testaceis—Long corp ln vix 1

*Habitat* Teneriffam, per marginem rivuli ad Agua Garcia capta

Known from the following species by its larger size, broader and more ovate outline, darker hue, and very much more deeply sculptured surface, by its prothorax being rounded (and more coarsely crenulated) at the sides, and constricted posteriorly, and by its limbs being robuster and more rufescent. At first sight it is somewhat allied to the common European *H testacea*, but it is relatively a little wider and more ovate than that insect, its prothorax is a good deal rounder laterally and narrower behind, more uneven on the disc,

and with the crenulations more distinct, its colour is of a deeper brown, and its limbs are a trifle shorter and more robust. Hitherto I have only observed it beneath stones in the little stream which flows through the wood of the Agua Garcia, of Teneriffe,—where, however, it is tolerably abundant.

### 143 *Hydræna quadricollis*, n. sp.

*H. elongato-ovata*, angustula, subtestaceo-fusca, subnitida, capite prothoraceque punctatis, illo nigrescente, hoc in disco paulo obscuriore, subquadrato, postice vix angustiore, ad latera (oculo fortissime armato) vix serratulo, elytris subovalibus, leviter sed crebre striato-punctatis (punctis parvis), antennis ad basin, palpis pedibusque gracilibus, testaceis.—Long. corp. lin. vix  $\frac{3}{4}$ .

*Habitat* Teneriffam, prope urbem Sanctam Crucem reperta.

As has been already implied, the present *Hydræna* may be at once recognized from the last species by its smaller size, narrower outline, paler and much less deeply sculptured surface, by its prothorax being *subquadrate* (or but very slightly narrowed behind) and with the lateral serrations excessively minute, and by its limbs being slenderer and of a more pallid hue. The only spot in which I have observed it is near Sta Cruz of Teneriffe,—where I have several times taken it, though very sparingly, amongst weeds in the small pools of the Barrianco Santo.

## Fam. 6. HYDROPHILIDÆ.

### Genus 52. LIMNEBIUS

Leach, *Zool. Miscell.* iii. 93 (1817).

### 144 *Limnebius gracilipes*, n. sp.

*L. ovalis* (antice et postice subæqualiter rotundatus), ater, subconvexus, subtiliter et parce pubescens, prothorace (oculo fortiter armato) minute punctulato, versus angulos posticos obscure dilutior, elytris fere impunctatis, ad apicem fere concoloribus, antennis, palpis pedibusque gracilibus, picco-ferrugineis.—Long. corp. lin.  $\frac{2}{3}$ — $\frac{3}{4}$ .

*Habitat* in rivulis Canariæ, Teneriffæ, Gomeræ et Palmæ, hinc inde haud infrequens.

Easily recognized from the following species by its oval outline (being almost equally rounded before and behind), considerably blacker, less convex, less pubescent and very much more lightly punctured surface, and by its slenderer limbs. I have taken it in the stream at Mogan, in the south-west of Grand Canary, in the vicinity

of S<sup>ta</sup> Cruz, and at Las Mercedes, of Teneriffe, and in the Barranco de San Juan (near the Souces) of Palma, and it was captured by Dr Crotch in Gomera

145 *Limnebius punctatus*, n sp

*L. obovatus* (antice latus rotundatus, postice gradatim acutior), piceo-niger, obsolete subaenescens, convexus, grosse et sat parce pubescens, prothorace profunde punctato, ad latera ferrugineo, elytris vix levius punctatis, versus apicem paulo dilutionibus, antennis, palpis pedibusque robustis, piceo-ferrugineis—Long corp lin  $\frac{2}{3}$

*Habitat* Teneriffam, in rivulis (præsertim quodam parvo per sylvam Aguæ Garcæ fluente) degens

The obovate outline of this *Limnebius* (it being wide and rounded in front, but gradually acuminate behind), in conjunction with its more piceous and obscurely submetallic hue (the sides, moreover, of the prothorax, and the apex of the elytra, being rather brightly ferruginous), its convexer, deeply punctured and more coarsely pubescent surface, and its comparatively robust limbs, will at once separate it from the preceding species. Both of these *Limnebi*, I may add, are perfectly distinct from the Madeiran *L. grandicollis*—which is remarkable, *inter alia*, for its more elliptic outline (being widened about the middle) and alutaceous sculpture, as well as for the almost equally impressed and remote punctures of its entire upper surface, those of the elytra being perhaps, if anything, somewhat the deepest. The only locality in which I have myself observed the *L. punctatus* is the little stream which flows through the Agua Garcia of Teneriffe, where it is tolerably common, it has, however, been taken at Ycod el Alto, in the same island, by Dr Crotch

Genus 53 **LACCOBIUS**

Erichson, *Kaf der Mark Brand* 1 202 (1837)

146 *Laccobius minutus*.

*Chrysomela minuta*, *Linn*, *Fna Suec* 166 (1761)

*Laccobius minutus*, *Erich*, *Kaf der Mark Brand* 1 203 (1837)

— —, *Woll*, *Ins Mad* 95 (1854)

— —, *Id*, *Cat Mad Col* 31 (1857)

*Habitat* insulas Canarienses, in Hierro solâ adhuc haud detectus

The common European *L. minutus* (which is found also in Madeira and Porto Santo) appears to be universal at the Canaries, Hierro being the only island, out of the seven, in which I do not happen to have observed it. There can, however, I should imagine, be little doubt that it must exist there also, though the absence of streams in that island, and the consequent scarcity of water, would certainly

imply that, if present at all, it must at any rate be scarce. In Lanzarote, Fuerteventura, and Gomera it was likewise captured by Mr Gray, in Teneriffe by M Hartung, and in Teneriffe and Gomera by Dr Crotch. It seems to have a larger and a smaller state, between which I have not as yet observed transitional links, nevertheless there is no differential character, that I can perceive, to warrant the suspicion that they are specifically distinct. The examples from the eastern islands of the archipelago are, on the average, of a paler hue than those from the central and western ones,—which is precisely analogous to the Porto-Santan specimens, as compared with those from Madeira proper.

#### Genus 54 **PHILHYDRUS**

Solier, *Ann de la Soc Ent de France*, iii 315 (1834)

##### 147 **Philhydrus melanocephalus.**

*Hydrophilus melanocephalus*, *Oliv*, *Ent* iii 39 14 (1795)

——, *Brulle*, in *Webb et Berth* (Col) 58 (1838)

*Philhydrus melanocephalus*, *Woll*, *Ins Mad* 98 (1854)

——, *Id*, *Cut Mad Col* 32 (1857)

*Habitat* in aquis Lanzarotæ, Fuerteventuræ, Canariæ, Teneriffæ et Gomeræ, sat vulgaris

As in the case of the last insect, the common European *P melanocephalus* is all but universal (probably indeed quite so) in these islands. Hitherto, however, I have captured it only in Lanzarote, Fuerteventura, Grand Canary, Teneriffe, and Gomera,—in the first two and last of which it was likewise found by Mr Gray, and in the last by Dr Crotch. It abounds in the streams of Porto Santo, and the same two states (a paler and a darker one) which occur there exist equally at the Canaries.

#### Genus 55 **BEROSUS**

Leach, *Zool Miscell* iii 92 (1817)

##### 148 **Berosus spinosus.**

*Hydrophilus spinosus* (*Stev*), *Schon*, *Syn Ins* ii 8 (1808)

*Berosus spinosus*, *Ahr*, *Fna Ins Europ* iii f 5 (1816)

——, *Steph*, *Ill Brit Ent* v 400 (1832)

——, *Brulle*, in *Webb et Berth* (Col) 59 (1838)

*Habitat*? [testibus DD Webb et Berth, in ins Canariensibus mihi non obvisus]

I have not myself observed this European *Berosus* at the Canaries, and I may add that, had it been found in Madeira, I certainly should

not have admitted it into the present Catalogue,—having but too good reason for suspecting that several of the insects recorded by M. Brullé, from the very scanty collection of MM Webb and Berthelot, were brought by Mr Webb from Funchal, and were afterwards mixed up (whether inadvertently or by design I cannot tell) with his material from these islands\*. But since the *B spinosus* has not hitherto been detected in the Madeiran Group, and since I have no grounds for concluding that the specimens from any other country were amalgamated by Mr Webb with his Canarian ones, and since moreover I have inspected his examples which still exist in Paris, I am inclined to admit the species into this list. At the same time I must state that I do so somewhat reluctantly, since the entire absence of a single word from M. Brullé as to which of the seven islands it was found in (if indeed in any of them) renders me totally unable to record its “habitat”. It is far from improbable, however, that it may occur in the blackish streams and Salinas of Lanzarote or Fuerteventura.

### Genus 56 **HYDROBIUS.**

Leach, *Zool Miscell* iii 93 (1817)

#### 149 *Hydrobius hæmorrhous*, n sp

*H* ovalis, fusco-nigri, nitidus, distincte (præsertim in elytris) et sat crebre punctatus, capite utrinque ante oculos, prothoracis limbo plus minus conspicue necnon elytriorum limbo plus minus obscure dilutioribus, elytris striâ suturali profundâ (antice evanescente) impressis, antennis ad basin palpisque (apice ipsissimo nigro excepto) testaceis, pedibus rufo-piceis—Long corp ln  $1\frac{1}{8}$ – $1\frac{1}{2}$

*Habitat* in aquis Canariæ Grandis, rarissimus

The present *Hydrobius* is about the size of the Madeiran *H. Manchantæ*, but perfectly distinct from it,—as will be at once seen by a reference to the diagnosis given (in 1857) in my Madeiran Catalogue. It is apparently very scarce, Grand Canary being the only island in which I have hitherto detected it, where, during the spring of 1858, I captured it sparingly at Teior, and about wet rocks in the mountains of the interior, towards Tajajana.

### Genus 57 **CHÆTARTHRIA.**

(Waterhouse) Steph, *Ill Brit Ent* v 401 (1832)

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\* That such was the case with the *Scarites abbreviatus* (= *dimidiatus*, B.), the *Harpalus distinguendus* and *consentaneus*, and perhaps one or two others, I have already recorded my conviction.

150 *Chætarthria similis*, n sp

*C* valde affinis *C seminulo*, sed vix (nisi fallor) mea varietas geographica sensim major et (oculo fortiter armato) argutius punctata, prothorace ad latera ipsissima vix grossius marginato et ibidem (ut in elytrorum apice) clarius dilutiore, antennis, palpis pedibusque paulo pallidioribus —Long corp lin 1

*Habitat* in humidis et aquosis Canariæ, Teneriffæ, Gomerae et Palmæ, rarissimus

Although very closely allied to the common European *C seminulum*, I think that the present *Chætarthria* can scarcely be referred actually to that species. It is, on the average, perceptibly larger, and when viewed beneath a high magnifying power will be seen to be much more sharply and distinctly punctured. The sides of its prothorax, as well as the apex of its elytra, are more diluted in hue, and the former is perhaps a trifle more coarsely margined at its extreme lateral edges. Its limbs, too, are altogether a shade paler. It appears to be decidedly rare, though widely spread over the archipelago. I have taken it in moist spots in the region of El Monte, of Grand Canary, as well as in Palma, and it was found by Dr Crotch in Teneriffe and Gomera.

## Fam. 7. SPHÆRIDIDÆ.

## Genus 58 CYCLONOTUM

(Dejean) Erich, *Kaf der Mark Brand* 1 212 (1837)

151 *Cyclonotum orbiculare*

*Hydrophilus orbicularis*, *Fab*, *Ent Syst* 1 184 (1792)

*Hydrobius orbicularis*, *Steph*, *Ill Brit Ent* 11 132 (1829)

*Cyclonotum orbiculare*, *Erich*, *Kaf der Mark Brand* 1 214 (1837)

*Cœlostoma orbiculare*, *Bulle*, in *Webb et Berth (Col)* 58 (1838)

*Habitat* in aquosis Fuerteventuræ, Canariæ, Teneriffæ, Gomerae et Palmæ, vulgaris

This insect, so abundant throughout the whole of Europe, is probably universal at the Canaries,—though I do not happen to have observed it in either Lanzarote or Hierro (the extreme eastern and the extreme western islands of the archipelago), but in Fuerteventura, Grand Canary, Teneriffe, Gomera, and Palma I have taken it, more or less abundantly. In Fuerteventura and Gomera it was likewise found by Mr Gray, in Teneriffe by M Hartung, and in Teneriffe and Gomera by Dr Crotch.

Genus 59 **DACTYLOSTERNUM.**Woll, *Ins Mad* 99 tab iii f 1 (1854)152 **Dactylosternum abdominale**Sphæridium abdominale, *Fab, Ent Syst* 1 79 (1792)Cœlostoma abdominale, *Brulle, in Webb et Berth (Col)* 58 (1838)Dactylosternum Roussetii, *Woll, Ins Mad* 100 tab iii f 1 (1854)———, *Id, Cat Mad Col* 32 (1857)

*Habitat* Canariam, Teneriffam et Gomeram, folius putridis *Opuntie Tuncæ* præsertim gaudens

The *D. abdominale* of southern Europe and northern Africa, and which occurs also at Madeira, is found sparingly in these islands. I have taken it at Teror in Grand Canary, near St<sup>n</sup> Cruz in Teneriffe, and at San Sebastian in Gomeia,—in the last two of which islands it was also captured by Dr Crotch, and in the last by Mr Gray. It is particularly fond of the putrid leaves of the Puckly Pear (*Opuntia Tuna*, Mill), which have been thrown away as refuse and allowed to rot, and were such to be well searched it would probably be found to be more local than scarce.

Genus 60 **CERCYON**Leach, *Zool Miscell* iii 95 (1817)153 **Cercyon inquitum**Cercyon inquitum, *Woll, Ins Mad* 103 (1854)———, *Id, Cat Mad Col* 34 (1857)

*Habitat* Teneriffam, prope Portum Orotavæ semel captum

The only Canarian example that has come under my observation of this insect (which is not uncommon on the level of the sea-shore, in certain spots, at Madeira) was captured by myself, on the wing, immediately outside the Puerto Orotava of Teneriffe, during the spring of 1858.

154 **Cercyon lepidum**, n. sp.

*C.* ovale postice subacutum, convexum, nitidum, supra ubique punctulatum, capite prothoraceque nigris (hoc ad latera concolore), elytris testaceo-rufis, circa scutellum interdum obsolete obscurioribus, sat profunde punctato-striatis, antennæ ad basin, palpis pedibusque piceo-testaceis.—Long corp. ln  $\frac{3}{4}$ —vix 1.

*Habitat* Fuerteventuram et Gomeiam, in illâ sub stercore camelino ad Rio Palmas mense Aprilis ineunte a. n. 1859 deprehensum, in hac nuper cepit Dom. Crotch.

In general outline and colouring the present somewhat insigni-

ficant *Cercyon* is a good deal allied to the common European *C melanocephalum*. It is, however, considerably smaller than that insect, its punctuation is finer and less dense, and its elytra and limbs are a shade paler (or more testaceous),—the former, moreover, having only a slight tendency to be occasionally obscured about their scutellary region, and with their striæ somewhat deeper. Perhaps it is nearer still to the *C terminatum*, Mshn (= *plagiatum*, E1). The only specimens which I have myself captured (twelve in number) were taken from beneath camels' dung, in the Rio Palmas of Fuerteventura, at the beginning of April 1859. I have, however, examined others, taken by Dr Crotch in Gomera.

### 155 *Cercyon nigriceps*

*Deimestes nigriceps*, Mshn, *Ent Brit* 72 (1802)

*Sphæridium centimaculatum*, Sturm, *Deutsch Fna*, II 23 (1807)

*Cercyon centrimaculatum*, Muls, *Palpe de France*, 169 (1844)

— —, Woll, *Ins Mad* 104 (1854)

— —, Id, *Cat Mad Col* 34 (1857)

*Habitat* Lanzarotam, Canariam, Teneriffam, Gomeram et Palmam, in stercore bovino et equino haud infrequens

This common European *Cercyon* (which is universal in Madeira and Porto Santo) occurs rather sparingly in these islands. I have taken it in Lanzarote, Grand Canary, Teneriffe, and Palma,—in the last of which it was likewise found by Mr Gray, and in Teneriffe and Gomera by Dr Crotch.

### 156 *Cercyon quisquilius*

*Scarabæus quisquilius*, Linn, *Fna Suec* 138 (1761)

*Cercyon quisquilius*, Muls, *Palpe de France*, 166 (1844)

— —, Woll, *Ins Mad* 105 (1854)

— —, Id, *Cat Mad Col* 34 (1857)

*Habitat* Lanzarotam, Fuerteventuram, Teneriffam, Gomeram et Palmam, in stercore bovino, equino, camelino sat vulgare

Like the last species the present *Cercyon* (which abounds throughout the greater portion of Europe, and which occurs in Madeira and Porto Santo) is widely spread over the Canarian Group,—where it is probably universal. Hitherto, however, I have only observed it in Lanzarote, Fuerteventura, Teneriffe, and Palma, in the first and last of which islands it was also captured by Mr Gray, and in Teneriffe and Gomera by Dr Crotch.

## Fam. 8. SILPHIDÆ.

## Genus 61 CATOPS

Paykull, *Fna Suec* 1 342 (1798)157 *Catops putridus*, n sp

*C* ovalis, fuscus, minute pubescens, prothorace convexo, ad latera subæqualiter rotundato (*i e* antice et postice æqualiter angustiore), basi truncato, angulis posticis vix productis, elytris obsoletissime substriatis necnon striâ suturali profundâ in utroque impressis, antennis ad basin pedibusque fusco-testaceis, illis ad apicem obscurioribus sat clavatis — Long corp lin  $1\frac{1}{4}$

*Habitat* Palmam, sub cortice laxo putrido in Barranco de Galga Maio exeunte A D 1858 semel tantum lectus

The only specimen which I have seen of this distinct *Catops* was captured by myself from beneath the rotting bark of a tree towards the head of the Barranco de Galga, in the north-west of Palma, on the 31st of May 1858. It has somewhat the appearance, at first sight, of the European *C. velox*, but is rather smaller and more oval than that insect (being nearly *equally* narrowed at either extremity), with its prothorax (which is *regularly* rounded at the sides, truncated at the base, and has the hinder angles scarcely at all produced) less developed, with its elytra obscurely substriated, with its posterior legs shorter, and with its antennæ more clavate at their apex

## Genus 62 SILPHA

Linnæus, *Syst Nat* 11 569 (1767)(Subgenus *Heterotemna*, Woll)

The Teneriffan *Silphæ* are moulded on a rather peculiar type, and might indeed be almost regarded as generically distinct from the more northern members of the group. They are remarkable, *inter alia*, for their rather large size, apterous bodies, and exceedingly elongated limbs, for their antennæ being slender\*, hardly at all

\* This great length and slenderness of the antennæ applies to *both* of the Canarian *Silphæ*, though perhaps a trifle more so to the *simplicicornis* than to the *figurata*. Nevertheless M. Biulle makes it to be distinctive of the former only, for, speaking of the *simplicicornis*, he adds "le caractere le plus saillant de cet insecte consiste dans la forme de ses antennes, qui sont plus longues et plus grêles que dans aucune autre espece". If however we turn to his Plate, we there find that the antennæ of the *figurata* are merely *dotted* in,—thus indicating that he drew out his diagnosis of that insect from a single example in which the antennæ were broken off.

thickened at the extremity, and with their eighth joint (or the fourth from the apex) *greatly elongated* and triangular, for their prothorax being much developed, rounded and broadly compressed at the sides, very uneven on the disc and more or less scooped-out in front, and for their elytra being very widely margined, especially behind I have not, however, dissected them, to ascertain whether they possess any differential characters in their oral organs, to correspond with these external (but nevertheless purely structural) ones

### 158 *Silpha simplicicornis*

*S. oblonga*, nigra, subnitida, prothorace in disco vix sed versus latera leviter punctulato, apice sat profunde emarginato, ad latera valde explanato-rotundato, postice in disco obsoletissime et obtuse longitudinaliter 4-subcostato, elytris leviter subasperato-punctulatis, utroque 3-costato, antennis valde elongatis, fuscescentibus *Fem* vix opacior, elytrorum costâ exteriori (præsertim ante apicem) magis elevatâ—Long corp lin 7-9

*Silpha simplicicornis*, Brulle, in Webb et Beith (Col.) 59 pl n f 10 [script *tenuicornis*\*] (1838)

*Habitat* in sylvaticis Teneriffæ, hinc inde haud infrequens

The larger size of this noble *Silpha*, in conjunction with its more shining and much more lightly punctured surface, its more uneven and laterally developed prothorax (on which the longitudinal costæ are very obtuse and almost obsolete), the much less elevated ridges of its elytra, and its rather longer limbs, will readily separate it from the following species. It appears to be the commoner of the two,—though, at the same time, exceedingly local and confined to certain spots within the sylvan districts of Teneriffe. I have taken it in the laurel-woods on the mountains above Taganana, as also at Las Mercedes and (more particularly) at the Agua Garcia. It has likewise been communicated by the Barão do Castello de Paiva, and I possess specimens, given me by Dr Heer, which were collected by M. Hartung

### 159 *Silpha figurata*

*S. oblonga*, nigra, subopaca, prothorace profunde punctato, apice

\* It is much to be regretted that M. Brulle should not have made up his mind as to the names of his species before his Plates were engraved, for as it is, these two Teneriffan *Silphas* stand in his work under no less than four separate titles! The present species is called *simplicicornis* in his letter-press, and *tenuicornis* on his Plate, whilst the following one is described as the *figurata*, but is figured under the title of *costata*! Indeed, from the excessive badness of his figures, and the fact that they are not even referred to at all in the text (as is the case with the whole 29 species which he has illustrated!), it really becomes difficult to tell, from this non-agreement of the names in the letter-press and Plate, which figure and which diagnosis are intended to correspond

leviter emarginato, ad latera explanato-rotundato, postice in disco leviter longitudinaliter 4-costato (costis internis distinctioribus), elytris profunde asperato-punctatis, utroque alte et acute 4-costato, antennis elongatis, fuscescentibus  
*Fœm* solam adhuc vidi — Long corp lin  $6\frac{1}{2}$

*Silpha figurata*, *Brulle*, in *Webb et Berth (Col)* 59 pl 11 f 11 [*scripta costata*] (1838)

*Habitat* Teneriffam, mihi non obvia specimen unicum a Dom Fry, Londini, communicatum solum vidi

I have not, myself, ever taken this insect, and indeed the only specimen (a female) which has come under my observation has been communicated by Alexander Fry, Esq, who received it from a friend by whom it was captured in Teneriffe. Whether therefore it be peculiar to the higher elevations (as I am inclined to suspect) it is not in my power to decide, but, so far as it is possible to judge from the loose and imperfect diagnosis of M. Brullé, I have no doubt whatsoever that it is the species which he intended to designate, under the title of *S figurata*. Judging therefore from this single example, its rather smaller size, more opaque and very much more deeply punctured surface (the punctures of the elytra being also roughened, so as to present a sculpture having somewhat the appearance of a file), combined with its less developed, not quite so uneven, more distinctly costate and more anteriorly-emarginated prothorax, the much more elevated ridges of its elytra, and its slightly less elongated limbs, will, apart from minor differences, at once separate the species from the *S simplicicornis*

## Fam. 9. ANISOTOMIDÆ.

### Genus 63 ANISOTOMA.

(Knoch) Illig, *Kaf Preuss* 69 (1798)

#### 160 *Anisotoma canariensis*

*A* ovalis, convexa, nitida, nigro- vel fusco-picea, capite prothoraceque sat distincte punctatis, elytris versus basin paulo rufescentioribus, sat profunde punctato-striatis, interstitiis punctulatis, antennis ad basin pedibusque piceo-ferrugineis, femoribus muticis  
*Fœm* β [forsan meae immatura] corpore pallido  
*Mus*, tibis posterioribus distinctius arcuatis — Long corp lin. 1

*Anisotoma canariensis*, *Woll*, *Ann Nat Hist* (3rd series) xi 216 (1863)

*Habitat* in ins Hierro, rarissima, varietatis β, in Canaria Grandi captum exemplar unicum adhuc vidi

Apparently of the greatest rarity I captured four specimens of it in the sylvan district of El Golfo, on the western side of Hierro, during February 1859, and another (which although of a pallid hue I believe to be conspecific with the rest, and merely immature) in the region of El Monte, in Grand Canary, later in the spring of the same year

161 *Anisotoma oceanica*, n. sp.

*A. breviter ovalis* postice subacuta, valde convexa, nitidissima, nigropicea, capite prothoraceque leviter punctulatis, illo rufescente, elytris apice acutiusculis et ibidem paulo pallidioribus, versus basin obsolete rufescentioribus, levissime punctato-striatis, interstitiis minute punctulatis, antennis ad basin pedibusque rufo-ferrugineis. *Mas* adhuc latet, specimen unicum (sc. fœmineum) solum detexi — Long corp. lin. vix 1.

*Habitat* in montibus sylvaticis Teneriffæ, sub folis dejectis ad Las Mercedes capta.

Like the last species, the present one would appear to be excessively scarce,—being, in fact, hitherto unique. It was taken by myself, during June 1858, from beneath dead leaves, under the old trees in the highest part of the forest of Las Mercedes, in Teneriffe. It may be known from the *A. canariensis* by being more *shortly* ovate, and posteriorly subacute, by its convexer, more minutely punctulated and more highly polished surface, by its finer and more delicately punctured striae, and by the apex of its elytra being gradually somewhat more pellucid,—causing that portion to appear slightly paler than the rest of the surface.

Genus 64 AGATHIDIUM

Illiger, *Kaf. Preuss.* 81 (1798)

162 *Agathidium globulum*, n. sp.

*A. nigrum*, prothoracis limbo obscure rufescentiore, capite prothoraceque (oculo fortissime armato) subtilissime alutaceis, illo minute hinc minutissime (vix perspicue) punctulatis, elytris (præsertim circa medium) sat distincte sed minute punctulatis, ad humeros oblique truncatis, apice subacutis, striâ suturali nullâ impressis, antennis pedibusque piceo-ferrugineis.

*Var. β* Minus distincte punctulatum, capite prothoraceque vix alutaceis — Long corp. lin.  $\frac{3}{4}$ —1.

*Habitat* in sylvaticis Canariæ et Teneriffæ, sat rarum.

The present *Agathidium* is about the size of, or perhaps a little larger than, the European *A. mandibulare*. It is, however, remarkable for its evidently, though minutely, punctulated surface (the

punctures being more especially conspicuous about the middle of the elytra), for its delicately alutaceous head and prothorax, and for its entire freedom from a sutural stria. From the *A. marginatum* of more northern latitudes, with which it has a good deal in common, it chiefly differs in being (on the average) rather smaller and darker, less globose (or a little more acute at its hinder apex), in the minutely alutaceous sculpture of its head and prothorax, and in its antennæ being longer and slenderer,—the subclaval joints being moniliform, instead of broad and transverse. It is decidedly rare, or at any rate very local. I have taken it sparingly in the region of El Monte in Grand Canary, as also at the Agua Garcia, and (more especially) in the woods above Taganana, of Teneriffe. In the last of these localities I once found it rather commonly—adhering to rotten sticks in the dampest and thickest part of the forest. The specimens from Grand Canary are a trifle less evidently punctulated than those from Teneriffe, and their head and prothorax are (when viewed beneath the microscope) scarcely perceptibly alutaceous, but there is no other difference in them, that I can detect.

### 163 *Agathidium integricolle*, n. sp.

*A. præcedenti fere simile, sed vix major, prothorace latiore, integro (i. e. antice, pro capitis receptione, haud excavato), nitidior (nec alutaceo), in limbo distinctius pallidior, scutello majore, elytris sensim rotundationibus, apicem versus minus acutis sed ibidem rufescentioribus, ad humeros magis oblique defalcantibus, necnon striâ suturali (antice evanescente) in utroque conspicue impressis*—Long corp. lin.  $1\frac{1}{4}$ .

*Habitat* Teneriffam, a cl. W. D. Crotch nuper repertum.

Were not its characters so well expressed, I should not have ventured to define a new *Agathidium* from the single, imperfect example from which the above diagnosis has been compiled. But since the structure of its prothorax and more oblique shoulders, as well as the presence of a sutural stria on each elytron, remove it into a different *Section* of the genus from that which contains the *A. globulum*, I cannot omit it from the present Catalogue. It was taken by Dr. Crotch, during the spring of 1862, in Teneriffe (though he has no recollection of the precise locality), and is, unfortunately, destitute both of its head and limbs. Nevertheless there is no possibility of confounding it with the *A. globulum*, from which it may immediately be known by its prothorax being wider, unalutaceous (and therefore more shining), more distinctly pallid at its margins, and entire in front (or completely unscooped-out for the reception of the head), by its

scutellum being larger, and by its elytra being perceptibly rounder, or less acute, (and more rufescent) behind, more obliquely lopped-off at their humeral angles, and furnished with an evident (though anteriorly evanescent) sutural stria on each. Apparently, too, it is a trifle larger than the *globulum*. In its anteriorly unemarginated prothorax it would seem almost to merit *generic* separation, nevertheless its external features are so precisely those of an *Agathidium* that, until further material has been obtained, and its limbs and mouth have been carefully examined, I am unable to pass any opinion on its purely structural details.

## Fam. 10. CLAMBIDÆ.

### Genus 65 CLAMBUS

Fischel, *Entomog* 1 52 (1820)

#### 164 *Clambus compheans*, n sp

*C* breviter ovalis, nitidissimus, impunctatus, fere glaber (pilis brevissimis perpaucis valde remotis paucè obsitus), capite prothoraceque piceo-ferrugineis, hoc in limbo clariore, oculis parvis, a capitis margine remotis, elytris nigris vel piceo-nigris, apice acutiusculis, antennis pedibusque pallide testaceis, illarum clavâ obscuriore.—Long corp lin vix  $\frac{3}{4}$

*Habitat* in Canaria, Teneriffa et Gomera, sat rarus

The present *Clambus* is larger than any of the few European species which have hitherto been detected, and it is further remarkable for its more or less rufescent head and prothorax (the latter of which has its edges broadly pale and subpellucid), for the excessively short, minute, and remote pile with which it is sparingly beset, for its eyes being small and considerably removed from the margin of the head (the lateral angle of which is not *quite* so acute as in the ordinary *Clambi*), and for its very pallid limbs. It appears to be rare,—the only spots in which I have myself observed it being in the region of El Monte in Grand Canary, and at Las Mercedes and the Agua Garcia of Teneriffa. Specimens, however, have been taken by Dr Clotch both in the latter island and in Gomera. It is scarcely possible, I think, that it can be a geographical modification of any of the more northern members of the genus.

### Genus 66 CALYPTOMERUS

Redtenbacher, *Fna Austr* 159 (1849)

165 *Calyptomerus dubius*

- Scaphidium dubium*, *Mshn, Ent Brit* 1 234 (1802)  
*Clambus enshamensis* (*Westw*), *Steph, Ill Brit Ent* 11 184 (1829)  
*Comazus enshamensis*, *Farm et Lab, Faun Franç* 328 (1854)  
*Calyptomerus dubius*, *Woll, Cat Mad Col* 147 (1857)

*Habitat* Tencriffam, rarissime, ad Agua Mansa lectus

The *C. dubius*, which is widely spread over Europe and which occurs also at Madeira, is apparently very rare in these islands,—the only two Canarian specimens which I have seen having been taken by myself at the Agua Mansa of Teneriffe

## Fam. 11. PTILIADÆ.

## Genus 67 ACROTRICHIS.

Motschulsky, *Bull de Moscou*, xxi 569 [script *Acratrichis*] (1848)

166 *Acrotrichis fucicola*

- Trichopteryx fucicola*, *Allibert, Rev Zool* 52 (1844)  
 ———, *Farm et Lab, Faun Franç* 332 (1854)  
 ——— *mollis*, *Haldy, Nat Hist Rev* 11 (*Proc*) 123 (1855)

*Habitat* sub fucis, per oras maritimas Lanzarotæ, Fuerteventuræ et Teneriffæ

The comparatively flattened body and oblong outline of the *A. fucicola*, in conjunction with its very pubescent surface (which, on account of the whitish decumbent pile with which it is clothed, has a somewhat silvery appearance), the diluted apex of its elytra and hinder prothoracic angles (the former of which are separately rounded off at their inner or sutural angle), the distinctly margined base of its pronotum, and its rather elongated antennæ (the club of which is excessively lax), will at once characterize it. Through the kindness of M. Allard, of Paris, I have received for comparison a specimen of the true *A. fucicola* from La Teste, which agrees precisely with the Canarian ones. It is identical with the *A. mollis* of Haldy, of which I also possess examples, taken on the sea-shore near Dublin. It is a tolerably common insect, just above high-water mark, on the sandy beaches of Lanzarote and Fuerteventura,—occurring beneath Algæ and other marine *rejectamenta*. In the latter of those islands it was also found (near Puerto de Cabias) by Mr Gray and two specimens are now before me which were taken by Dr Clotch in Teneriffe.

167 *Acrotrichis Matthewsii*, n. sp.

*A.* breviter obovata, valde convexa, pubescens, capite prothoraceque nigris, hoc lato, angulis posticis longe productis, elytris fuscescentioribus, apice dilutis truncatis, antennis pedibusque testaceis — Long corp lin vix  $\frac{1}{2}$

*Habitat* Palmam, per regiones sylvaticas sub foliis dejectis vulgaris

The short, wide, and convex body of this *Acrotrichis*, combined with its obovate outline (it being broader in front than posteriorly), the greatly produced hinder angles of its prothorax, and its fuscescent and apically paler elytra, will sufficiently distinguish it from the other species here enumerated. I may add that it has been examined by the Rev A. Matthews, who considers it undoubtedly new, and I have much pleasure, therefore, in naming it after him. It appears (so far as I have observed hitherto) to be peculiar to the island of Palma, throughout the sylvan districts of which it is universal. I have taken it on the ascent to the Cumbre above Buenavista, in the Barranco de Agua, the Barranco de Galga, and in several other localities.

168 *Acrotrichis fascicularis*.

*Latidius fascicularis*, *Hbst, Kaf* v 8 t 44 f 7 (1793)

*Trichopteryx fascicularis*, *Erich, Nat der Ins Deutsch* iii 19 (1848)

*Acrotichis fascicularis*, *Woll, Ins Mad* 108 (1854)

— —, *Id, Cat Mad Col* 35 (1857)

*Habitat* in Canaria, Teneriffa, Gomera et Hierro, præsertim per regiones sylvaticas, vulgaris

This *Acrotrichis* (which occurs at Madeira) appears to be very abundant throughout Grand Canary, Teneriffe, Gomera, and Hierro, —particularly, however, in the sylvan districts of intermediate elevations. My Teneriffan examples are principally from beneath dead leaves at Las Mercedes, La Esperanza, the Agua Garcia, Ycod el Alto, &c., and the Hierro ones from the region of El Golfo. It has also been captured, abundantly, in Gomera, by Dr. Clotch. It is regarded by Mr. Matthews as identical with the common European *A. fascicularis*. It may be known *primâ facie* from the last species by its more oblong outline, comparatively longer and flatter body and less developed prothorax, and by its elytra (except the extreme hinder margin) being almost as black as the rest of the surface, whilst from the following one its larger size and more produced thoracic angles, in conjunction with its more finely punctured surface and paler antennæ, will equally remove it.

169 *Acrotrichus sericans*

- Trichopteryx sericans*, *Heer, Fna Helv* 1 374 (1841)  
 ———, *Erich, Nat der Ins Deutsch* III 23 (1848)  
 ——— *depressa*, *Redt, Fna Austr* 149 (1849)

*Habitat* in Canaria, Teneriffa, Gomera et Hierro, sat rara

At once known from the preceding three species by its smaller size and more deeply punctured surface, by its outline being usually (if anything) rather wider behind than in front, by the much less produced posterior angles of its prothorax, and by its darker antennæ. It is considered by Mr Matthews to be identical with the European *A sericans*\*. So far as I have observed hitherto, it appears to be somewhat rare in these islands. I have taken it sparingly near Teror in Grand Canary, as also in Teneriffe and Hierro, but it has been captured more abundantly in Gomera, by Dr Crotch.

Genus 68 *NEPHANES*

Thomson, *Skandin Coleopt* 1 62 (1859)

170 *Nephanes abbreviatella*.

- Trichopteryx abbreviatellus*, *Heer, Fna Helv* 1 375 (1841)  
 ——— *culta*, *Gyllm, in Sturm, Deutsch Fna*, XVII (1845)  
 ——— *abbreviatellus*, *Erich, Nat der Ins Deutsch* III 23 (1848)  
*Titan abbreviatellus*, *Matth, in Zool* XVI 6110 (1858)  
*Elachys abbreviatellus*, *Woll, Ann Nat Hist* (3rd series) V 221 (1860)

*Habitat* Teneriffam et Gomeram, a cl W D Crotch deprehensa

This very minute insect (which is rather common beneath decaying vegetable refuse around Funchal, in Madeira) altogether escaped my own observations at the Canaries. Several undoubted examples of it have, however, lately been communicated to me by Dr Crotch, who captured them in Teneriffe and Gomera during the spring of 1862. Those from the former island were found at Ycod el Alto, and those from the latter above Hermigua.

Genus 69 *PTENIDIUM*.

Erichson, *Nat der Ins Deutsch* III 34 (1848)

171 *Ptenidium lævigatum*

- Trichopteryx lævigata*, *Gyllm, in litt*  
*Ptenidium lævigatum*, *Erich, Nat der Ins Deutsch* III 36 (1848)  
 ———, *Faun et Lab, Faun Franç* 340 (1854)

*Habitat* in Canaria, Teneriffa, Gomera, Palma et Hierro, rarior

\* I should perhaps state, however, that, on a subsequent examination of two of my specimens, Mr Matthews felt a little doubtful whether they should not rather be referred to the (European) *T brevipennis*.

The rather large size and *glabrous* surface of this *Ptenidium* (which even beneath a high magnifying power is only just perceptibly punctured, though minutely alutaceous) will at once distinguish it from the two following species. It is apparently very local in, though widely spread over, these islands. I have taken it sparingly in Grand Canary, at the Agua Garcia, in Teneriffe, in Palma, and (more abundantly), at a low elevation, in the district of El Golfo, on the western side of Hierro,—where, during February 1858, I captured several specimens of it from beneath vegetable refuse in a sandy lane. A single example is also now before me, which was found by Dr Crotch, during the spring of 1862, in Gomera.

### 172 *Ptenidium apicale*.

*Ptilium apicale*, *Sturm*, in *lett*

*Trichopteryx apicalis*, *Gyllm*, in *Sturm*, *Deutsch. Ent.* xvii 85 (1845)

*Ptenidium apicale*, *Erich*, *Nat. der Ins. Deutsch.* iii 36 (1848)

—, *Woll*, *Ins. Mad.* 110 (1854)

—, *Id.*, *Cat. Mad. Col.* 37 (1857)

*Habitat* in Fuerteventura, Canaria, Teneriffa et Gomera, vulgaris.

This common European insect (which abounds at Madeira) is probably universal in these islands, though hitherto I happen to have myself observed it in only three of them,—namely, Fuerteventura, Grand Canary, and Teneriffe. It has, however, been taken abundantly in Gomera by Dr Crotch. My Fuerteventuran specimens are principally from the Rio Palmas, the Canarian ones from Teior, and the Teneriffan ones from the vicinity of Sta Cruz, the Agua Garcia, La Esperanza, &c. It may be known from the last species by its rather smaller size and by its pubescent and distinctly punctured surface.

### 173 *Ptenidium punctatum*.

*Scaphidium punctatum*, *Gyll*, *Ins. Suec.* iv 293 (1827)

*Ptenidium punctatum*, *Faun. et Lab.*, *Faun. Franc.* 341 (1854)

*Habitat* per oram maritimam Lantarotæ, sub fucis captum.

The comparatively minute size, less convex and more oblong body of this common European *Ptenidium*, combined with its coarser pubescence and very much deeper punctuation (more particularly of the prothorax), will readily distinguish it from both of the foregoing species. It appears to be decidedly rare at the Canaries,—the only two specimens which I have seen having been captured by myself, from beneath marine *rejectamenta*, on the sandy sea-shore of Lantarote, immediately to the south of Arrecife.

Genus 70 **PTINELLA.**(Motschulsky) Matthews, *Zool* xvi 6106 (1858)174 *Ptinella angustula.**Ptilium angustulum*, *Gillm*, in *Stu m*, *Deutsch Fna*, xvi 66 pl 324 f 6 (1845)*Habitat* Palmarum, rarissime, sub cortice laxo *Pin canariensis* Junio ineunte a d 1858 deprehensa

Apparently of the greatest rarity in these islands The only three Canarian specimens which I have seen were captured by myself in Palma, at the beginning of June 1858 They were found beneath the bark of old pine-trees,—one of them high up in the Barranco above Sta Cruz, and the other two in the Pinal of the Banda, near the edges of the great Caldera They have been examined carefully by the Rev A Matthews, who believes them to be identical with the European *P angustula* of Gillmeister

**Fam. 12. PHALACRIDÆ.**Genus 71 **PHALACRUS.**Paykull, *Fna Suec* iii 438 (1800)175 *Phalacrus coruscus.**Phalacrus coruscus*, *Payk*, *Fna Suec* iii 438 (1800)—— —, *Steph Ill Brit Ent* ii 161 (1829)—— *coruscus*, *Erich*, *Nat der Ins Deutsch* iii 110 (1848)*Habitat* insulas omnes Canarienses, passim

The common European *P coruscus* is *universal* at the Canaries Palma is the only island out of the seven in which I have not taken it, but it was captured there (as also in Lanzarote) by Mr Gray In Teneriffe it was found likewise by Dr Chotch

Genus 72 **OLIBRUS.**Erichson, *Nat der Ins Deutsch* iii 113 (1848)176 *Olibrus florum*, n sp

*O obovatus*, ante medium latiusculus, nitidissimus, testaceus, capite, prothoracis disco elytrorumque suturâ plus minus fusciscentibus, elytris levissime punctulato-striatis — Long corp lin 1-1 $\frac{1}{3}$

*Habitat* in Canaria, Teneriffa, Palma et Hierro, super flores (præsertim *Cineraria*) hinc inde vulgaris in Hierro prædominat

Closely allied to the common European *O corticalis*, from which

however it may be known by being, on the average, slightly larger, relatively broader in outline (it being very distinctly wider at the junction of its prothorax and elytra), by the disc of its pronotum being darker (the edges alone being testaceous), by its suture also being conspicuously darkened, and by its striæ being more evident. I have taken it in Grand Canary, Teneriffe, Palma, and Hierro, and there can be little doubt that it must occur in Gomera also but in Lanzarote and Fuerteventura I believe that it does not exist. Indeed it becomes gradually more abundant as we approach the western portion of the archipelago, being (so far as I have observed hitherto) rare in Grand Canary, sparingly distributed in Teneriffe (where it was found likewise by Dr Crotch), tolerably common in Palma, and absolutely teeming in Hierro,—where, during February 1858, I captured it on various flowers (particularly those of a large and pale *Cineraria*) in several parts of the island, though especially around Valverde. In this last locality it was found likewise by Mr Gray.

#### 177 *Olibrus congener*, n. sp.

*O* ovalis, subænescenti-piceo-niger, nitidissimus, elytris fere simplicibus (postice versus suturam stria obsoletissima vix impressa), antennæ pedibusque longiusculis, testaceis.—Long corp. lin.  $\frac{3}{4}$ –1.

*Habitat* Lanzarotam, circa oppidum Haria ad flores haud infrequens.

The present *Olibrus* may be known from the following one by its rather larger size, less shortened outline, just perceptibly subpiceous hue, by its elytra being (if possible) even still more obsoletely striated, and by its limbs being longer and paler. It has a good deal the appearance, at first sight, of the *O. liquidus* of Erichson, which abounds in Madena, but is less acuminate and almost concolorous (instead of being rufescent) posteriorly, its outline is relatively somewhat broader, its elytral striæ are still more faint (being scarcely traceable), and its entire surface is a little more blassy. Hitherto I have observed it only in Lanzarote, towards the north of which island, however, it is far from uncommon, where, moreover, it was likewise taken by Mr Gray and M. Hartung.

#### 178 *Olibrus subæneus*, n. sp.

*O* breviter ovalis, ænescenti-niger, nitidissimus, elytris obsolete substriatis, antennæ pedibusque breviusculis, plus minus clare piceo-testaceis.—Long corp. lin.  $\frac{2}{3}$ –vix  $\frac{3}{4}$ .

*Habitat* in Canaria et Hierro, super flores varios, rarior.

The small size and short-oval outline of this *Olibrus*, combined

with its uniformly brassy-black surface, its very obsoletely striated elytra, and its rather abbreviated, piceo-testaceous (sometimes nearly piceous) limbs, will suffice to separate it from the preceding species. It is apparently rare, Grand Canary and Hierro being the only islands in which I have hitherto observed it.

### 179 *Olibrus consimilis*.

- Dermostes consimilis*, *Mshn, Ent Brit* 1 75 (1802)  
*Phalacrus geminus*, *Illig, in Panz, Krit Rev* 1 27 (1805)  
*Olibrus geminus*, *Erich, Nat der Ins Deutsch* iii 120 (1848)  
 — *consimilis*, *Woll, Ins Mad* 115 (1854)  
 — —, *Id, Cat Mad Col* 37 (1857)

*Habitat* in Canaria, Teneriffa et Gomeia, ad flores, rarus

This common European insect (which occurs sparingly at Madenia) is decidedly rare in these islands. I have taken it at Maspalomas in the extreme south of Grand Canary, as also at Souzal and the Agua Garcia in Teneriffe, in the last of which, as well as in Gomera, it was found likewise by Dr Crotch.

## Fam. 13. NITIDULIDÆ.

### Genus 73 *HETEROBRACHIUM* (nov. gen.)

*Corpus*, antennæ et instrumenta cibaria fere ut in *Brachyptero*, sed *prothorace* magis quadrato (in utroque sexu diverso), *abdomine* nisi fallor simplici (segmento terminali ut mihi videtur haud aucto, ut in *Cerco*), *palporum maxillarum articulo ultimo* longiore subaciculari ad apicem truncato, *paraglossis* vix distinctis. *Pedes* graciliores quam in *Brachyptero*, necnon in sexu masculino multo longiores, *antici* longiores quam posteriores, in maribus longissimi *femoribus* (præsertim masculis) ad apicem internum angulato-dentatis *tibis* gracilioribus quam in *Brachyptero* necnon ad apicem externum minus angulatis, *anticis* ibidem etiam oblique truncatis et spinâ internâ magnâ robusta curvata auctis [calcaribus in posterioribus minoribus æqualibus], *anticis* in maribus valde curvatis, in foeminis subrectis, *intermediis* in maribus subcurvatis, in foeminis rectis, *posticis* in utroque sexu rectis *tarsis* et *unguiculis* ut in *Brachyptero*, sed articulo basilari paulo angustiore.

*Ab ἑτερος*, varius, et *βραχίον*, brachium

As will be seen from the above structural comparative diagnosis, the insect for which I have proposed the present genus has much in common with *Brachypterus*. In its external facies indeed, antennæ, and oral organs it is so nearly identical with the members of that group that it might thus far at least have been almost associated with them, though at the same time I must confess that I cannot

satisfy myself of its possessing the additional apical abdominal segment which is characteristic of the male *Brachypterus*, whilst, moreover, the sexual differences of its prothorax, the longer and more articulated joint of its maxillary palpi, and its scarcely prominent paraglossæ are other (though not very important) points in which it recedes from the *Brachypterus* proper. But, apart from these considerations, the peculiarities of its legs (which, together with the antennæ, are considerably elongated in the male sex) are so decided that I cannot but believe that it ought to be separated from that genus. Thus, they are not merely longer than those of the *Brachypterus*, but their femora are constricted beneath before the extremity so as to shape out a conspicuous anguliform tooth, their tibiæ are slenderer, being less dilated at the apex (where also the front pair have their inner terminal spur\* strong, large, and flexuose) and *greatly curved* in the male sex, and the basal joint of their tarsi is considerably less widened than the following two. The tibiæ (and even the femora), when viewed beneath a high microscopic power, are minutely serrated along their inner edge, and in the front pair of the males the outer angle is obliquely lopped-off, or truncated, giving that part of the leg a very singular appearance. These curious sexual modifications of the legs are quite unnoticed in all the generic and subgeneric diagnoses both of *Brachypterus* and *Cercus* to which I have had access, but in the unproduced hinder angles of its prothorax, and the globose, immensely developed ultimate joint of its labial palpi, *Heterobrachium* has more in common with the normal *Brachypterus* than with M. Duval's *Heterostomus*.

### 180 *Heterobrachium longimanum*, n. sp.

*H* oblongo-ovatum, testaceum vel fusco-testaceum, subnitidum, pubescens, dense punctatum, prothorace ad latera rotundato, postice truncato, elytris vix pallidioribus, per suturam (præsertim antice) plus minus suffuse et anguste fusciscentibus, antennarum clavâ vix obscuriore, tarsis ad apicem ipsissimum nigris.

*Mas* paulo major, prothorace latiore, magis rotundato, convexo, antennis pedibusque longioribus, tibus anticis curvatis.

*Fem* paulo minor, prothorace minore, minus convexo, antennis pedibusque brevioribus, tibus subiectis.—Long corp. lin.  $\frac{7}{8}$ –1.

*Habitat* in excelsioribus sylvaticis Teneriffæ et Palmæ, rarissimum.

Apparently extremely rare,—the only spots in which I have taken it being on the summit of the sylvan range above Taganana and Las Mercedes of Teneriffe, and in Palma.

\* The calcaria in the four hinder feet are *both* of them small, and subequal.

Genus 74 **BRACHYPTERUS**Kugelann, in *Schneid Mag* 506 (1794)181 **Brachypterus velatus.**

*B. oblongo-ovatus*, subconvexus, viridescenti-niger, nitidus, glosse flavescenti-cinereo-pubescent, dense punctatus, prothorace ad latera subaequaliter rotundato, angulis posticis obtusis, scutello obtuse triangulati, antennis pedibusque rufo-testaceis, illarum clavâ tarsorumque apicibus ipsissimis nigrescentibus

*Var. β* [an species?] Prothorace vix brevior, antennarum clavâ pallidâ, articulis ante clavam vix latioribus

*Var. γ* Subcyanescenti-niger, minus pubescens — Long corp lin  $\frac{3}{4}$ —1

*Brachypterus velatus*, *Woll, Ann Nat Hist* (3d series) vi 217 (1863)

*Habitat* in Canaria, Teneriffa et Hiero, super folia *Urtice urentis*, L., sat vulgaris *var. β* ad Canariam pertinet, sed *varietatis γ* specimen unicum in Lanzarota captum solum vidi

The more or less greenish-black hue of this *Brachypterus*, combined with its long and coarse cinereous pile (which has generally a somewhat yellowish tinge) and its bright rufo-testaceous limbs, will (apart from minor differences) sufficiently characterize it. It is rather common, on Nettles (particularly the *Urtica urens*), in Grand Canary, Teneriffe, and Hiero,—in the first of which I have taken it abundantly at El Monte, in the second above the Puerto of Orotava, and in the third to the south-west of Valverde, in the last two of which localities it was also captured by Mr Gray. In Teneriffe it was likewise found by Dr Clotch. The *var. β* I have observed hitherto only in Grand Canary, and of the *var. γ* I obtained a single specimen in Lanzarote. It is just possible that the latter may be the exponent of another, though closely allied, species, nevertheless I think it would be hardly safe, in the absence of further material, to regard it as such. The example before me seems to differ in having its antennæ pale throughout, and with their subclaval joints perhaps somewhat broader,—causing the club to appear a little less abrupt.

182 **Brachypterus curtulus**, n. sp.

*B. ovatus*, curtulus, convexus, subaenescens-niger nitidus, minute et parce cinereo-pubescent, dense punctatus, prothorace ad latera aequaliter rotundato, angulis posticis rotundatis, scutello subsemicirculari, antennis pedibusque rufo-testaceis, illarum clavâ tarsorumque apice ipsissimo nigrescentibus — Long corp lin  $\frac{2}{3}$ — $\frac{3}{4}$

*Habitat* in Lanzarota et Fuerteventura, hinc inde parce captus

The smaller size, more compact, convexer and more ovate form of

this rather insignificant *Brachypter us*, in conjunction with its slightly biassy and less pubescent surface, and the more rounded hinder angles of its prothorax, will serve to distinguish it from the last species. Hitherto I have observed it only in Lanzarote and Fuerteventura,—in both of which islands it occurs sparingly on flowers

### Genus 75 **CARPOPHILUS**

(Leach) Steph, *Ill Brit Ent* iii 50 (1830)

#### 183 *Carpophilus hemipterus*.

*Deimestes hemipterus*, *Linn, Syst Nat* ii 567 (1767)

*Carpophilus hemipterus*, *Steph, Ill Brit Ent* iii 50 (1830)

—— —, *Woll, Ins Mad* 117 (1854).

—— —, *Id, Cat Mad Col* 38 (1857)

*Habitat* Teneriffam, in ipsâ urbe Sanctæ Crucis frequens, certe introductus

I have taken this almost cosmopolitan insect abundantly, at times, in the houses at St<sup>e</sup> Cruz in Teneriffe, in which position it was found also by M. Hartung. As in Madeira, it is doubtless an imported species through the medium of commerce

#### 184 *Carpophilus auropilosus*

*Carpophilus auropilosus*, *Woll, Ins Mad* 117 (1854)

—— —, *Id, Cat Mad Col* 38 (1857)

*Habitat* Fuerteventuram, Canariam et Teneriffam, ad Rio Palmas Fuerteventuræ plurima specimina sub stercore camelino Aprilis incunte A.D. 1859 collegi

This insect would seem to be more strictly indigenous in these islands than it is in Madeira. In the latter it occurs principally about houses and amongst stores (such as dried fruits, sugar, arrow-root, &c.), and has all the appearance of being an imported species, but at the Canaries I have found it *in aperto*, and quite removed from localities of that kind. I have taken it in Grand Canary, and on one occasion (in considerable abundance) from beneath camels' dung in the Rio Palmas of Fuerteventura, and it was captured by Dr. Crotch, during the spring of 1862, at Ycod el Alto, in Teneriffe

### Genus 76 **NITIDULA**

Fabricius, *Syst Ent* 77 (1775)

#### 185 *Nitidula flexuosa*

*Nitidula flexuosa*, *Oliv, Ent* ii 12 7 (1790)

—— —, *Erich, Nat der Ins Deutsch* iii 159 (1848)

*Nitidula flexuosa*, *Woll, Ins Mad* 119 (1854)

— —, *Id, Cat Mad Col* 39 (1857)

*Habitat* Fuerteventuram, ad Agua Bueyes d 28 Jan A D 1859  
deprehensa

This European *Nitidula* (which occurs also in Porto Santo) was taken by Mr Gray and myself, from out of bones, at Agua Bueyes in Fuerteventura, on the 28th of January 1858, which is the only instance that I am aware of, of its having been found at the Canaries

### Genus 77 PRIA

(Kirby) Steph, *Ill Brit Ent* iii 49 (1830)

#### 186 *Pria dulcamarae*

*Lania dulcamarae*, *Scop, Ent Carn* 22 (1763)

*Pria truncatella* et *Meligethes dulcamarae*, *Steph, Ill Brit Ent* iii 45 et 50 (1830)

— *dulcamarae*, *Woll, Ins Mad* 122 (1854)

— —, *Id, Cat Mad Col* 40 (1857)

*Habitat* Teneriffam et Palmam, in herbis, rarissime

The only island of the Group in which I have myself observed this European insect is Palma, where, during May of 1858, I captured several specimens of it by brushing various plants on the damp perpendicular rocks high up in the Barianco da Agua. It was however taken sparingly, during the spring of 1862, by Dr Crotch, in Teneriffe. It occurs likewise at Madeira

### Genus 78 MELIGETHES

(Kirby) Steph, *Ill Brit Ent* iii 45 (1830)

#### 187 *Meligethes varicollis*

*Meligethes varicollis*, *Woll, Ins Mad* 126 (1854)

— —, *Id, Cat Mad Col* 41 (1857)

— *erythroga*, *Hartung* [nec *Mshn*], *Geolog Verh. Lanz. und Fuert* 140

*Habitat* Lanzarotam, Fuerteventuram et Teneriffam, hinc inde in floribus haud infrequens

This large and distinct *Meligethes* (which occurs rarely in the sylvan districts of Madeira) is locally far from uncommon at the Canaries, nevertheless it is chiefly in Lanzarote and Fuerteventura that I have hitherto observed it. In the former of those islands it was taken by Mr Gray and myself, near Hama, during January 1858, and during the following spring I captured it again in the same region, as also in the Rio Palmas of Fuerteventura. And I subsequently obtained four examples of it at Taganana, in the north of Teneriffe. In Lan-

zarote it was likewise found by M. Hartung, two of whose specimens have been communicated to me by Dr Heer, but it is wrongly identified in his catalogue with the *Nitidula erythroga* of Marsham, from which it is totally distinct. All the individuals which I have examined (47 in number) have then prothorax entirely concolorous with the rest of their surface, so that the state which is found occasionally in Madeira with the edges of the pronotum testaceous would appear to be quite aberrant, and one which perhaps does not exist at the Canaries.

### 188 *Meligethes virescens*, n. sp.

*M.* angustulo-oblongus, convexus, æneo-viridis, minutissime cinereo-pubescent, profunde sed vix dense punctatus, antennis pedibusque piceo-ferrugineis, tibus anticis leviter dilatatis, extus subtiliter denticulatis (denticulis mox ante apicem longioribus).

*Var.*  $\beta$  capite prothoraceque rufescentibus — Long corp. lin.  $\frac{2}{3}$  — vix 1.

*Habitat* Teneriffam et Gomeiam, floribus *Messerschmidtiæ fruticosæ* præcipue gaudens.

The present *Meligethes* is somewhat allied, in colour and outline, to the common European *M. æneus*, nevertheless it is smaller and rather narrower than that insect, its surface is much more coarsely (and not quite so densely) punctured, its antennæ are relatively shorter, and the denticulations of its front tibiæ are more distinct. It possesses a curious tendency to have its prothorax occasionally somewhat diluted in hue, and in a specimen which was captured by Mr Gray in Gomera (during our visit to that island in February 1858) both the head and pronotum are bright rufous, nevertheless it is certainly nothing more than an extreme variety of the species now under consideration. I have taken the *M. virescens* rather commonly between the Puerto and Villa of Orotava in Teneriffe, where it is particularly attached to the fragrant blossoms of the *Messerschmidia fruticosa*.

### 189 *Meligethes tristis*.

*Nitidula tristis*, Schupp, in litt.

*Meligethes tristis*, Sturm, *Deutsch. Ent.* xvi. 40 t. 309 f. a, A, b (1845)

— —, Woll, *Ins. Mad.* 124 (1854)

— —, Id., *Cat. Mad. Col.* 41 (1857)

— —, Hartung, *Geolog. Verhältn. Lanz. und Fuert* 141

*Habitat* in Canaria, Teneriffa, Gomera, Palma et Hierro, in locis intermediis, passim.

The European *M. tristis* (which is universal at Madeira) is sparingly distributed over these islands, where it occurs principally in sylvan spots of intermediate and rather lofty elevations. I have taken it in

Grand Canary, in Teneriffe (namely at Taganana, on the mountains above Sta Cruz, at Las Mercedes, the Agua Garcia, &c), in Palma (namely in the eastern ravines, at the Banda, &c), and in Hierro, and it was captured by Mr Gray near San Sebastian of Gomeia. It was also met with by Dr Crotch in Teneriffe, Gomeia, and Palma. It varies a little in the colour of its pubescence, which is either of a cinereous white or with a more or less yellowish tinge,—being occasionally of an almost golden hue. It is entered in M Hartung's list of Fuerteventuran Coleoptera, and although there is no reason why it should not exist in that island, yet considering the many errors which I have already alluded to as having been most undoubtedly committed in M Hartung's *habitats*, and since I am determined to quote no localities in this Catalogue except those concerning which I have the most positive evidence, I think it safer *not* to record the species as a Fuerteventuran one—more particularly as it appears probable, from my own observations, that the insect does not occur in the two eastern islands of the archipelago.

### Genus 79 XENOSTRONGYLUS

Wollaston, *Ins Mad* 127 tab 11 f 8 (1854)

#### 190 *Xenostrongylus histrio*.

*Xenostrongylus histrio* et canariensis, *Woll*, *Ins Mad* 127, 128 tab 11 f 8 (1854)

— —, *Id*, *Cat Mad Col* 41 (1857)

— *acutus*, *Kiesw*, *Beil Zeit* 57 (1859)

*Habitat* insulas omnes Canarienses, præsertim in locis sylvaticis, vulgaris

The *X histrio*, which is universal in the Madeiran Group (being found in Madeira proper, Porto Santo, and on the Desertas), and which has also been detected (since the publication of my 'Insecta Maderensia') in Sicily and the south of Spain, is equally universal at the Canaries,—in the *whole seven* islands of which I have myself taken it, more or less abundantly. In Lanzarote, Palma, and Hierro it was found likewise by Mr Gray, and in Teneriffe and Gomera by Dr Crotch. It is more common, however, within the sylvan regions of the central and western portions of the archipelago than elsewhere, in certain parts of which it absolutely teems. Thus, at the Agua Garcia of Teneriffe and in the district of El Golfo on the western side of Hierro I have brushed it in immense numbers from out of the rank fern and vegetation in shady spots.

It is excessively variable in the colour of its scales, and in the

development and exact arrangement of its fasciæ and markings,—being usually paler, and also a trifle larger, in exposed barren localities (such as those of Lanzarote and Fuerteventura) than it is in the moister and more wooded ones. In the latter indeed its blacker scales often preponderate to such an extent as almost to cover the entire surface,—under which circumstances a single example (if taken alone) might well be mistaken for the exponent of another species. But, judging from the immense series which I have collected in all the islands, I am quite satisfied that no second *Xenostromgylus* has as yet been brought to light,—since I am able to connect completely the various states, and shades of colouring, which obtain in different districts. On the average, perhaps, the Canarian specimens are a trifle smaller and more darkly coloured than the Madeiran ones, and the latter than those from the Mediterranean regions\* and it was to a solitary and rather blackened individual collected in Teneriffe that I gave (*vide* 'Ins Mad' 127), in 1854, the trivial name of *canariensis* nevertheless I now perceive, from more extensive material, that it is conspecific with the *X. histrio*, and I have accordingly suppressed it.

#### Genus 80 CYBOCEPHALUS

Erichson, in *Ger. Zeitsch.* v 441 (1844)

The little genus *Cybocephalus* of Erichson is undoubtedly coincident with my *Stagonomorpha* ('Ins Mad' 484), which I regarded, in 1854, as a new group of the *Anisotomidae*. And so closely indeed do the species which compose it resemble diminutive *Agathidia*, that it is difficult to believe that their affinities should be rather with *Cyllodes*, *Xenostromgylus*, and *Cychramus* than with *Amphacyllis* and *Agathidium*. Still, for the reasons which have been already announced by Erichson, and subscribed to by others, I would not wish to dispute the relationship which is usually conceded to them. Their analogy, however, with the *Agathidia* is carried out in all their external (and many of their structural) details, for not only have they the power of rolling their bright glabrous bodies into a ball, but even the genus itself is capable of being subdivided in a precisely similar manner, dependent (as I have shown below) on the greater or less oblique-truncation of the humeral angles of the elytra. Indeed this *lopping-off* of the shoulders would be sufficient of itself to distinguish

\* Having received from Dr. Schaum a type of the *X. arcuatus* of Kiesenwetter, for comparison, I may add that I am quite satisfied it is not specifically distinct from the *histrio*. It is merely a trifle larger, and, from its limbs being tucked under it (so as to raise up the body), has the appearance at first sight of being a little more convex.

the second of the *Cybocephali* here enounced from the first, but (apart from its purely specific characters alluded to in the diagnosis) the less truncated apical joint, also, of its antennæ will still further remove that species from the *C. sphærule* (which is, in all respects, a normal representative of its group) Nevertheless in everything essential the *C. lœvis* is an undoubted *Cybocephalus*, and cannot possibly be treated as anything but congeneric with the other

As I was of course unaware when I published my *Stagonomorpha* that it was identical with *Cybocephalus*, it never occurred to me to refer at all to the diagnosis of the latter, and it is therefore worth observing that I should unintentionally have fully corroborated the after-remark of M. Jacq. Duval, that the tarsi of this genus are strictly tetramerous, and that consequently Erichson was mistaken in supposing that there existed a minute fourth joint concealed between the lobes of the deeply cordate third one I examined the feet of *Stagonomorpha*, at the time, with great care, and completely satisfied myself that there was no such additional articulation, and I am convinced therefore that M. Duval is perfectly correct in his statement on this point

§ I *Elytra ad humeros rotundata antennarum articulus ultimus brevissimus, valde truncatus*

### 191 *Cybocephalus sphærule*

*C.* breviter ovalis, ater (vel subænescenti-ater), nitidus, dense alutaceus, prothorace (oculo fortiter armato) minutissime et paucè punctulato, ad latera obscure dilutione, elytris (præsertim postice) sat distincte punctulatis, antennarum pedibusque breviusculis, fusco-testaceis

*Variat* capite prothoraceque dilute testaceis — Long corp. lin. vix  $\frac{1}{2}$  — vix  $\frac{2}{3}$

*Stagonomorpha sphærule* et unicolor, *Woll., Ins. Mad.* 484, 485 tab. x f. 8 (1854)

—— — — —, *Id., Cat. Mad. Col.* 148 (1857)

*Habitat* Lanzarotam, Canariam, Teneriffam, Gomeram et Palmam, præsertim in hortis super folia *Myrtorum*, hinc inde vulgaris

The present *Cybocephalus*, which appears to be identical with the species which I described from Madeira in 1854, differs, *inter alia*, from the European *exiguus* in being smaller, in having the hinder margin of its prothorax more sinuated or concave (causing the posterior angles to appear less rounded off), and in its surface, when viewed beneath the microscope, being much more coarsely alutaceous and with the (very remote) punctures relatively more evident. It

is widely spread over these islands, where in all probability it is universal. Hitherto, however, I have observed it only in Lanzarote, Grand Canary, Teneriffe, and Palma, though I have examined two specimens which were taken by Dr Clotch in Gomera. In Lanzarote it is decidedly rare. In Grand Canary it abounds in certain districts; thus, in the region of El Monte and at San Mateo I have taken it in the greatest profusion, in gardens, by beating the foliage of the common narrow-leaved Myrtle. In Teneriffe it appears to be scarce, where however I have met with it sparingly immediately above the Puerto Orotava, and elsewhere, whilst in Palma it is rather more common,—most of my specimens being from the upper part of the Barranco above S<sup>ta</sup> Cruz.

§ II *Elytra ad humeros oblique truncata antennarum articulus ultimus breviusculus, paulo truncatus*

192 *Cybocephalus lævis*, n sp

*C* breviter ovalis, ater, nitidissimus, haud alutaceus, prothorace latiusculo, impunctato, concolore, ad angulos posticos rotundato, elytris (præsertim postice) sat distincte punctulatis, antennis pedibusque fusco-testaceis.—Long corp lin vix  $\frac{1}{2}$

*Habitat* in Lanzarota, rarissimus

Amongst 83 specimens of Canarian *Cybocephali* which I have examined closely beneath the microscope, I find four which differ entirely from the rest, and I have consequently described them as above. The diminutive size of these insects necessarily renders their distinctive characters *microscopic* ones, but, in this instance at all events, they are certainly not the less real because (of necessity) thus difficult of observation. Apart from the structural features indicated in my *Sectional* diagnosis (of more obliquely truncated shoulders and the less abbreviated terminal joint of its club) which separate the present species from the last one, the *C lævis* may be further recognized by its more intensely black hue and apparently quite concolorous prothorax (which is more rounded off at the posterior angles), by its rather longer antennæ, and by its surface being more highly polished, and totally free (when viewed under the microscope) from the *alutaceous* sculpture which is never absent from its ally. Its pronotum, too, is apparently quite impunctate, there being no indication whatever of the minute (but distant) punctules which are always visible in that species. My four examples of the *C lævis* were all taken in Lanzarote, and, I believe (so far as I can recollect), on the sandy sea-shore near Arrecife.

Genus 81 **RHIZOPHAGUS**Heibst, *Kaf* v 18 tab 1 f 7-9 (1793)193 *Rhizophagus pinetorum*, n sp

*R* subconvexus, rufo-ferrugineus, nitidus, capito sat dense punctulato, prothorace elongato-oblongo, ad latera subiecto, postice vix angustiore, angulis anticis subporrectis, profunde sed paucè oblonge punctato, elytris fusiformi-parallelis, sat profunde punctato-striatis — Long corp lin vix  $1\frac{2}{3}$ -2

*Habitat* in pinetis Teneriffæ et Palmæ, lignum antiquum *Pinus canariensis* destruens

The present *Rhizophagus* is probably widely spread over the old Pinals of these islands, for, having taken it in several positions both in Teneriffe and Palma, I have but little doubt that it must occur in the ancient pine-forests of Grand Canary also. At the Agua Mansa, and in the lofty Pinal above Ycod el Alto, of Teneriffe it is occasionally abundant, in the rotten wood of the *Pinus canariensis*, as also, in similar places, in the Banda, and in the Barranco above Sta Cruz, of Palma. It may be known from the following species by being a little larger, more convex, and shining (there being no appearance of the alutaceous sculpture which characterizes that insect), by its prothorax being relatively somewhat longer, straighter at the sides, more coarsely and sparingly punctured, less evidently (if indeed at all) narrowed behind, and with the anterior angles more porrect, and by its elytra being more deeply punctate-striated.

It is very closely allied to the European *R. ferrugineus* and *perforatus*, partaking of the characters of them both without agreeing exactly with either, so that if it is to be regarded as a geographical modification of some northern form, it might be referred with almost equal propriety to either of those species. On this account I think it better to retain it as distinct, more particularly since the remoteness of its *habitat* and its exclusive attachment to the *Pinus canariensis* would alike imply that such, in all probability, is really the case. From the *ferrugineus* it differs in being a little more depressed and less cylindric (its elytra being rather more fusiform, or less straightened at the sides), in its prothorax being more narrowly margined and (together with the head) not quite so coarsely punctured, in its humeral angles being somewhat more porrect, and in the punctures and striæ of its elytra being less deep. From the *perforatus*, on the other hand, it may be known by being on the average considerably larger, by its prothorax being just perceptibly convexer, less remotely

punctured and more laterally compressed in front, and by its elytra being less acute behind, with their striæ rather deeper

194 *Rhizophagus subopacus*, n. sp.

*R.* subdepressus, rufo-ferrugineus, subopacus, minute alutaceus, capite convexo, dense punctulato, prothorace oblongo, ad latera vix subrotundato, postice sensim angustiore, angulis anticis rotundatis, obtusis, leviter et sat dense punctulato, in disco depresso, elytris fusiformi-parallelis, leviter punctato-striatis, per suturam obsolete obscurioribus, antennis breviusculis—Long corp. lin  $1\frac{1}{2}$ – $1\frac{3}{4}$

*Habitat* Palmam, in locis similibus ac præcedens, sed rarius

The rather flatter and less shining surface of this species (which, under a high magnifying power, is minutely and densely alutaceous), its slightly smaller size, its more finely and more closely punctulated prothorax, which is relatively somewhat shorter, more depressed on the disc, more perceptibly narrowed behind and rounded in front (causing the sides to be less straight), and with its anterior angles more obtuse, combined with its more lightly striated elytra, rather darkened suture, and perhaps somewhat shorter antennæ, will suffice to separate it from the *R. pinetorum*. It is very much rarer than that insect, for out of 89 specimens of Canarian *Rhizophagi* which I have just examined, four only belong to it. They were captured by myself in Palma, during the spring of 1858,—from beneath the rotten bark of a *Pinus canariensis* high up in the Barranco above S<sup>ta</sup> Cruz. That they are no local modification peculiar to that island is evident from the fact that I took them in company with the last species.

## Fam. 14. TROGOSITIDÆ.

### Genus 82 TEMNOCHILA

Westwood, *Zool. Journ.* v. 231 [script *Temnoscheila*] (1835)

#### 195 *Temnochila pini*

*T.* subcylindrico-parallelæ, cyanea, nitida, capite parce punctulato, antice carinâ mediâ angustâ impresso, prothorace trapeziformi, postice rotundato, angulis posticis obtusis, angulis anticis subporrectis, versus latera profunde et dense sed in disco leviter et parce punctato, elytris punctato-striatis, interstitiis transversim plicatis necnon uniseriatim punctulatis, antennis ad apicem tarsisque nigro-piceis—Long corp. lin 9

*Trogosita pini*, Brulle, in *Webb et Berth* (Col.) 70 (1838)

*Habitat* in pinetis Canariæ et Palmæ, truncos vetustos *Pin. canariensis* perforans

The only perfect example of this superb *Temnochila* which I have myself taken was captured, in the rotten wood of an old *Pinus canariensis* in Grand Canary (on the ascent to the Pinal from San Bartolomé, of Tarajana) during April 1858. I have, however, found the remains of it, in similar positions, at the Banda (towards the edges of the great Caldera) of Palma, and in all probability it occurs in Teneriffe likewise, and indeed wherever the remains of the ancient Pinals still exist. It is somewhat allied to the European *T. cœrulea*, but (judging from my single specimen) is considerably larger, cyanaceous or blue (instead of bluish-green), and not quite so shining, its head is rather more finely punctured and less deeply channeled in front, its prothorax is relatively both a little longer and a little wider, more sinuated at the apex and more rounded behind, with the anterior angles more porrected and the posterior ones more obtuse, and its elytra are more *straightly* truncated at their base, and rather less rugulose.

#### Genus 83 **LIPASPIIS.**

Wollaston, *Trans Ent Soc Lond* 140 [script *Leipaspis*] (1862)

#### 196 **Lipaspis lauricola.**

*Lipaspis lauricola*, *Woll*, *loc cit* 142 (1862)

*Habitat* in lauretis Teneriffæ et Palmæ, sub cortice arborum laxo, rarissima

For the generic characters of *Lipaspis*, and the distinctions between the three species here enumerated, I must refer to my paper on the "*Euphorbia*-infesting Coleoptera of the Canaries" lately published in the 'Transactions of the Entomological Society of London'. Although not belonging to the Euphorbian fauna, this insect and the following one were described (as will be seen on reference) in a foot-note to the memoir alluded to. The *L. lauricola* seems to be confined to the laurel-woods of intermediate elevations, and is apparently extremely rare. In such positions I have taken it, from beneath the loosened bark of the old trees, at Las Mercedes and towards Point Anaga of Teneriffe, as also high up in the Barranco da Agua, and the Barranco de Galga, of Palma.

#### 197 **Lipaspis pinicola**

*Lipaspis pinicola*, *Woll*, *loc cit* 143 (1862)

*Habitat* in pinetis Teneriffæ et Palmæ, rarissima

As in the case of the last species, I have hitherto observed the present *Lipaspis* only in Teneriffe and Palma,—where it appears to be

confined to the *Pinus canariensis* of the old Pinals, in the same manner as that insect is attached to the various laurels. It would seem to be even scarcer than its ally, though from the difficulty of reaching many of the elevated regions and precipitous mountain-slopes in which the fir-trees occur, it may perhaps in reality be rather *local* than absolutely rare. I have taken it sparingly in Teneriffe (from under the loose bark of a felled pine-tree at the Agua Mansa), and in the region of the Banda of Palma.

### 198 *Lipaspis caulicola*.

*Lipaspis caulicola*, Woll., *loc cit* 142 pl vii f 1 (1862)

*Habitat* Teneriffam, intra caulem putridum *Euphorbiae canariensis* in montibus supra Sanctam Crucem capta

The only specimen which I have seen hitherto of this insect was captured by myself, within the putrid stems of a *Euphorbia canariensis*, on the mountains above S<sup>ta</sup> Cruz of Teneriffe,—in the direction of Las Mercedes

### Genus 84 TROGOSITA.

Olivier, *Ent* ii 19 [script *Trogossita*] (1790)

§ I *Prothorax subcordatus antennæ apicem versus gradatim incrassatæ*

### 199 *Trogosita mauritanica*.

*Tenebrio mauritanicus*, Linn., *Syst Nat* ii 674 (1767)

*Trogossita mauritanica*, Oliv., *Ent* ii 19 6 (1790)

*Trogosita caraboides*, Brulle, in *Webb et Berth (Col)* 71 (1838)

— *mauritanica*, Woll., *Ins Mad* 154 (1854)

— —, *Id*, *Cat Mad Col* (1857)

— *caraboides*, Hartung, *Geolog Verhalt. Lanz und Fuert* 140 & 141

*Habitat* Lanzarotam, Fuerteventuram, Canariam et Teneriffam, in domibus et præsertim sub cremento farris circa basin acervorum tritici sparso, hinc inde vulgaris

The almost cosmopolitan *T. mauritanica* is doubtless an introduced insect in these islands,—no less than it is at Madeira. It has, however, completely established itself in various places, where it is often excessively common. It is beneath the refuse which strews the ground around the base of corn-stacks where it more particularly abounds, and in such situations I have observed it plentifully in Lanzarote and Fuerteventura,—in company with the *Silvanus surinamensis*, *Aglenus brunneus*, *Tenebrio obscurus*, *Cryptophagus dentatus*, *Corticaria serrata*, and certain other species. And I have taken it in houses (in the neighbourhood of grain, and other farinaceous sub-

stances) both in Grand Canary and Teneriffe, in the latter of which it has also been captured by the Barão do Castello de Paiva. In Lanzarote and Fuerteventura it was likewise met with by M. Hartung. There can be little doubt that it is universal throughout the archipelago.

§ II *Prothorax subquadratus antennæ ad apicem subito clavatæ (articulus 9<sup>no</sup>, 10<sup>mo</sup> et 11<sup>mo</sup> clavam distinctam intus serratam effluentibus)*

### 200 *Trogosita recta*.

*T* elongata, subdepressa, piceo-fusca, subopaca, capite prothoraceque profunde sed haud dense oblonge punctatis, hoc ad latera oblique recto, angulis anticis porrectis, angulis ipsissimis posticis exstantibus, elytris fusiformi-parallelis, profunde crenato-striatis.—Long corp. ln 3

*Trogosita recta*, Woll., *Trans Ent Soc Lond* (3rd series) 1 144 (1862)

*Habitat* Lanzarotam borealem, in trunco quodam *Euphorbiæ* putrido semel capta

Though certainly distinct from it, the present *Trogosita* is very closely related to the Madeiran *T serrata*. It is, however, a little darker and less parallel than that insect (its prothorax being a little wider in front, and the elytra a little more evidently dilated behind the middle), its prothorax is not *quite* so densely punctured, more coarsely margined, and straighter (though oblique) at the sides,—with its anterior angles more porrect, and its *extreme* basal ones more prominent, its whole body is a trifle less cylindric, and its tibiæ are less evidently pubescent along their inner edge. In its habits, too, it would appear to recede from that species,—the unique example which has come under my notice having been taken from out of a dead *Euphorbia*-stem at Yè, in the north of Lanzarote, during our encampment there in March 1859, whereas the *T serrata* has hitherto been detected only about the houses of Funchal and amongst various articles of commerce,—leading to the supposition that it has probably been accidentally introduced into the island.

In its mode of life indeed the *T recta* seems to be coincident with the *latens*, nevertheless it may be immediately known from that insect by its much smaller size, less parallel outline, and reddish-brown hue (the *latens* being black), by its less depressed upper surface, by the straighter sides and more porrected anterior angles of its prothorax, by its less deeply striated elytra, and by its rather shorter and less clavated antennæ,—the ultimate joint particularly being considerably less developed.

201 *Trogosita latens*. \*

*Trogosita latens*, Woll, *Trans Ent Soc Lond* (3rd series) 1 143 (1862)

*Habitat* in Lanzarota, Teneriffa et Hierro, sub cortice *Euphorbiarum* laxo putrido latens

This very distinct *Trogosita* (the characters of which are fully pointed out in my paper alluded to under *Leaspaspis lauricola*) appears to be both scarce and local, and confined (so far as observed hitherto) to the rotten Euphorbias, beneath the damp bark of which it lies concealed,—generally towards the base of the stems, and even underground near the roots. In such places it was found by Mr Gray and myself on the Rasco overlooking the Salinas, in the extreme north of Lanzarote, during January 1858, and I subsequently captured it, in similar spots, at Taganana of Teneriffe and in the district of El Golfo, on the western side of Hierro.

## Fam. 15. COLYDIADÆ.

## Genus 85 MONOTOMA

Herbst, *Natursyst* v (1793)

202 *Monotoma spinicollis*.

*Monotoma spinicollis*, Aubé, *Ann de la Soc Ent de France*, vi 463 pl 17 f 6 (1837)

— *spinifera*, Woll, *Cat Mad Col* 67 (1857)

*Habitat* Teneriffam et Gomeram, sub quisquilis degens

A single specimen of this European *Monotoma* (which occurs also in Madeira) was taken by Mr Gray from beneath vegetable refuse, in a garden near S<sup>ta</sup> Cruz of Teneriffe, during the winter of 1858, and six others have lately been communicated by Dr Crotch,—five of which he captured in Teneriffe, and the remaining one at Hermigua in Gomera.

203 *Monotoma picipes*.

*Monotoma picipes*, Hbst, *Kaf* v 24 (1793)

— —, Aubé, *Ann de la Soc Ent de France*, vi 458 pl 17 f 3 (1837)

— —, Redt, *Fna Austr* 203 (1849)

— *congener*, Woll, *Cat Mad Col* 68 (1857)

*Habitat* Teneriffam, a Dom W D Crotch reperta

I have not myself observed this common European insect at the Canaries, but four examples of it have been submitted to me by Dr Crotch, who captured them, during the spring of 1862, in Teneriffe. In all probability it will be found to be pretty general, if searched for beneath decaying vegetable refuse,—in which position it likewise

occurs at Madeira, from whence I described it, in 1857, under the name of *M. congener*

#### 204 *Monotoma quadricollis*.

*Monotoma quadricollis*, Aubé, *Ann de la Soc Ent de France*, vi 465 pl 17 f 7 (1837)

— —, Redt, *Fna Austr* 203 (1849)

— —, Woll, *Ann Nat Hist* (3rd series) v 263 (1860).

*Habitat* Lanzarotam, Fuerteventuram et Teneriffam, sub quisquilis, passim

The European *M. quadricollis* (which occurs also at Madeira) is rather common in certain positions at the Canaries. I have taken it abundantly, beneath vegetable *rejectamenta*, around Haria in the north of Lanzarote, from under camels' dung in the Rio Palmas of Fuerteventura, and near Orotava of Teneriffe, in the first of which islands it was found likewise by Mr Gray and Dr Crotch

#### 205 *Monotoma 4-foveolata*

*Monotoma 4-foveolata*, Aubé, *Ann de la Soc Ent de France*, vi 468 pl 17 f 9 (1837)

— —, Redt, *Fna Austr* 203 (1849)

— —, Woll, *Ann Nat Hist* (3rd series) v 264 (1860)

*Habitat* Lanzarotam et Teneriffam, rarissima

The present *Monotoma* (which, like the last one, is a well-known European species, and which is found also at Madeira) would appear to be rare in these islands. Indeed hitherto I have myself taken but a single Canarian example,—namely near Haria, in the north of Lanzarote. Two more, however, have come beneath my observation, captured by Dr Crotch in Teneriffe

#### Genus 86 **TARPHIUS**.

(Germar) Erich, *Nat der Ins Deutsch* iii 256 (1848)

#### 206 *Tarphius simplex*

*Tarphius simplex*, Woll, *Journ of Ent* i 382 pl 19 f 1 (1862)

*Habitat* Teneriffam, in lauretis editioribus, truncis ramulisque arborum prolapsis adhærens

For the specific characters of the nine *Tarphu* here enumerated, and their various diagnostic features, I must refer to my paper (above alluded to) which has lately been published in the 'Journal of Entomology'. The *T. simplex* is not uncommon within the laurel-districts of Teneriffe,—where (like the other species) it may be found adhering to the undersides of pieces of wood, the fallen trunks of trees, stones,

&c, in the thickest and dampest parts of the forest I have taken it at the Agua Mansa, Ycod el Alto, the Agua Garcia, Las Mercedes, and on the sylvan slopes above Taganana and Point Anaga

### 207 *Tarphius camelus*.

*Tarphius camelus*, *Woll*, *loc cit* 383 pl 19 f 2 (1862)

*Habitat* ins Hierro, in sylvaticis occidentalibus regionis "El Golfo" dictæ, mense Februario a d 1858, repertus

The only two specimens which I have seen of this fine *Tarphius* were captured by myself, during February 1858, in the island of Hierro—in the dense sylvan region which forms the upper part of the district of El Golfo

### 208 *Tarphius canariensis*.

*Tarphius canariensis*, *Woll*, *loc cit* 383 pl 19 f 3 (1862)

*Habitat* Canariam, Teneriffam et Palmam, in sylvaticis sat vulgaris

The present *Tarphius* is apparently more widely spread over the archipelago than any of the other species here enumerated In the wooded districts of Teneriffe it is universal—occurring, in similar spots as its allies, at the Agua Mansa, the Agua Garcia, Ycod el Alto, Las Mercedes, Taganana, &c, and I have likewise taken it, though sparingly, at Osorio in Grand Canary, and (more abundantly) in the various sylvan regions of Palma The examples from the latter island are just perceptibly narrower and less flattened than those from Teneriffe, and have their setæ a trifle longer, darker, and less thickened, their prothorax a little more scooped-out behind, their elytral nodules but seldom diluted in hue, and their antennæ perhaps (if anything) somewhat shorter, but I do not believe that they can be regarded as specifically distinct I have, however, in my paper already alluded to, recorded them as a "var  $\beta$ " of the *T canariensis*

### 209 *Tarphius erosus*

*Tarphius erosus*, *Woll*, *loc cit* 384 pl 19 f 4 (1862)

*Habitat* in sylvaticis Teneriffæ, una cum specie præcedente degens

It is just possible that this *Tarphius* may be but an extreme state of the *T canariensis*, in which the prothorax is much more suddenly and deeply scooped-out behind than is the case in the ordinary type, nevertheless, since I have not been able to connect it with that insect, I think it would scarcely be safe to treat it as such,—more particularly since it possesses other minute distinctions of its own (which are fully pointed out in my "Notes on the *Tarphius*" already

referred to) Hitherto I have observed the *T' erosus* only in the laurel-woods towards the north-eastern portion of Teneriffe,—where, at Las Mercedes, as also above Taganana and Point Anaga, it occurs, not uncommonly, in company with the last species

### 210 *Tarphius quadratus*

*Tarphius quadratus*, *Woll*, *loc cit* 384 pl 19 f 5 (1862)

*Habitat* in lauretis editioribus Palmæ, rarissimus

This broad and comparatively square *Tarphius* is apparently of the greatest rarity, and confined (so far as I have observed hitherto) to the laurel-regions of Palma,—where, during May and June of 1858, I captured it from beneath sticks and small pieces of wood on the ascent to the Cumbre above Buenavista, and towards the upper part of the Barranco de Galga

### 211 *Tarphius congestus*.

*Tarphius congestus*, *Woll*, *loc cit* 385 pl 19 f 6 (1862)

*Habitat* in lauretis et pinetis Teneriffæ, rarissimus

Likewise extremely rare, the only region in which I have hitherto captured it being that of the Agua Mansa of Teneriffe,—where I took it sparingly during May of both 1858 and 1859, not merely in the laurel-woods, but also amongst the *fir*-plantations on the ascent to the Cumbre

### 212 *Tarphius gigas*

*Tarphius gigas*, *Woll*, *loc cit* 386 pl 19 f 7 (1862)

*Habitat* Teneriffam, in sylvaticis rarissimus

Two specimens only of this comparatively gigantic *Tarphius* have as yet come beneath my notice They were both of them captured in the laurel-woods on the mountains between Taganana and Point Anaga, during May of 1859

### 213 *Tarphius caudatus*.

*Tarphius caudatus*, *Woll*, *loc cit* 386 pl 19 f 8 (1862)

*Habitat* in lauretis excelsioribus Teneriffæ, hinc inde haud infrequens

This curious species, so remarkable for its thick squarish body and flattened surface, and for the apical ridges of its elytra being lengthened out into a hinder process, or a kind of obtuse *tail*, is extremely local, but not very uncommon in the laurel-woods towards the north-eastern extremity of Teneriffe In the highest (sylvan) part of the Las Mercedes' range, as also in the dense forest above Taganana, I took it, in tolerable abundance, during May 1859

214 *Tarphius deformis*

*Tarphius deformis*, *Woll*, *loc cit* 387 pl 19 f 9 (1862)

*Habitat* Teneriffam sylvaticam, late sed parce diffusus

Widely spread over the sylvan regions of Teneriffe, though apparently everywhere scarce I have taken it, very sparingly, at the Agua Mansa, the Agua Garcia, and by the edges of the Vueltas on the wooded mountains above Taganana

Genus 87 **COSSYPHODES**

Westwood, *Trans Ent Soc Lond* (new series) 1 168 (1851)

215 *Cossyphodes Wollastonii*

*Cossyphodes Wollastonii*, *Westw*, *Trans Ent Soc Lond* 1 170 (1851)

— —, *Woll*, *Ins Mad* 146 tab iii f 3 (1854)

— —, *Id*, *Cat Mad Col* 49 (1857)

*Habitat* in formicarum nidis Teneriffæ et Gomæræ, rarissimus

This very remarkable and interesting little insect, which occurs in ants'-nests in Madeira, is found also, in similar positions, at the Canaries So far as I have observed hitherto, however, it appears to be exceedingly rare,—the only spots in which I have taken it being immediately outside the Puerto Orotava of Teneriffe and in the Barranco above San Sebastian of Gomera

Genus 88 **AULONIUM**

Erichson, *Nat der Ins Deutsch* iii 275 (1848)

216 *Aulonium sulcicolle*, n sp

*A* elongatum, cylindricum, nitidum, piceo-nigrum, elytris, antennis pedibusque rufo-ferrugineis, capite prothoraceque minute punctulatis, illo antice picescentiore, postice bituberculato, hoc 4-sulcato, sulcis intermediis antice evanescentibus, postice divergentibus, elytris minutissime (sed vix subseriatim) punctulatis—Long corp lin 2-2 $\frac{1}{2}$

*Habitat* Teneriffam et Palmam rarissimum, sub cortice *Pini canariensis* emortuo erodens

The present *Aulonium* seems, in some respects, to be intermediate between the European *A. sulcatum* and *bicolor*, though in its general colour and bituberculated head, as well as in the excessively fine punctules of its elytra, and the elevated, or costate, edge of the anterior portion of its outer prothoracic sulci, it has certainly more in common with the latter than with the former It is, however, larger, and relatively broader, than the *A. bicolor*, its elytra are entirely rufo-ferruginous (instead of with the posterior portion black), and

are even still less evidently striate-punctate (the minute punctules being scarcely at all longitudinally disposed), its frontal tubercles are perhaps somewhat more developed, and its prothorax (which has a less perceptible tendency to be narrowed behind) has its two inner sulci less parallel, or more divergent on the posterior disc

The *A sulcicollis* seems to be exceedingly rare, and confined to the rotten bark of old pine-trees in the Pinales of intermediate and rather lofty elevations, under which circumstances I have taken it at the Agua Mansa in Teneriffe, and in the Barranco above Sta Cruz in Palma

### Genus 89 **AGLENUS.**

Enichson, *Nat der Ins Deutsch* iii 285 (1848)

#### 217 *Aglenus brunneus*

*Hypophloeus* ? *brunneus*, Gyll, *Ins Suec* iii 711 (1813)

*Cerylon obsoletum*, Steph, *Ill Brit Ent* iii 98 (1830)

*Aglenus brunneus*, Enich, *Nat der Ins Deutsch* iii 285 (1848)

— —, Woll, *Ann Nat Hist* (3rd series) v 254 (1860)

*Habitat* in Lanzarota, Fuerteventura, Teneriffa, Gomera, Palma et Hierro, præsertim sub recremento farris circa basin acervorum tritici sparso, sat vulgaris

The European *A brunneus* (which occurs, in certain spots, around Funchal, in Madeira) is unquestionably universal in these islands,—though hitherto it does not happen to have been observed in Grand Canary But in Lanzarote, Fuerteventura, (at the Banda of) Palma, and (to the westward of Valverde in) Hierro, I have met with it more or less abundantly, and it was found by Dr Crotch in Teneriffe and Gomera In the first two of those islands it occasionally teems beneath the refuse at the base of corn-stacks (in company with the *Trogosita mauritanica*, *Silvanus surinamensis*, *Cryptophagus dentatus* and *obesulus*, *Corticaria serrata*, *Tenebrio obscurus*, *Anthicus floralis*, &c), where it has all the appearance of being an introduced insect

### Genus 90 **EUROPS**

Wollaston, *Ins Mad* 149 tab iii f 2 (1854)

#### 218 *Europs impressicollis.*

*Europs impressicollis*, Woll, *Ins Mad* 150 tab iii f 2 (1854)

— —, *Id*, *Cat Mad Col* 50 (1857)

— —, *Id*, *Trans Ent Soc Lond* (3rd series) i 145 (1862)

*Habitat* Euphorbias emortuas insularum omnium Canariensium, vulgaris

The Madeiran *E impressicollis* is universal at the Canaries, in the

whole seven islands of which I have myself taken it, except in Gomera,—where however it was captured, during the spring of 1862, by Dr Clotch. In Lanzarote and Hierro it was found also by Mr Gray, and, on the 11th of March 1859, I met with it even on the little island of Giaciosa, off the extreme north of the former. It is confined exclusively to the rotten *Euphorbia*-stems, on which it subsists (in company with the *Aphananthra*, and the various other insects peculiar to those plants), and where it frequently abounds.

### 219 *Europs duplicatus*

*Europs duplicatus*, Woll, *Trans Ent Soc Lond* (3rd series) 1 146 (1862)

*Habitat* Gomera, in plantis putridis *Euphorbiæ canariensis* in collibus supra San Sebastian repertus

It is somewhat remarkable that whilst failing to take the last species in Gomera, I should have captured the present one in its stead. As already stated, however, I have no doubt that the *E impressicollis* is found in Gomera no less than in the other portions of the Group, and that consequently my meeting with the present *Europs* during our short stay in that island was merely accidental. Be this however as it may, I should state that the *E duplicatus* (which, apart from all other differences, may be immediately recognized from its ally by having its prothorax free from a longitudinal impression, the place of which is occupied by two parallel rows of punctures) was taken abundantly from out of the putrid stalks of *Euphorbia canariensis* on the summit of a hill immediately to the south of San Sebastian, during February 1858.

## Fam. 16. CUCUJIDÆ.

### Genus 91 CAULONOMUS.

Wollaston, *Trans Ent Soc Lond* 147 (1862)

### 220 *Caulonomus rhizophagoides*

*Caulonomus rhizophagoides*, Woll, *Trans Ent Soc Lond* (3rd series) 1 149 pl 7 f 2 (1862)

*Habitat* in Lanzarota, Teneriffa et Hierro, in truncis *Euphorbia* um emortuis unâ cum genere *Europs* degens, sed multo rarior.

This interesting beetle (which I have described carefully in my Memoir on the "*Euphorbia*-infesting Coleoptera of the Canaries") is confined exclusively to the rotten *Euphorbias*, within the decayed stems and branches of which it resides,—in company with *Europs*,

*Aphananthum*, and the numerous other insects of like habits. It is, however, exceedingly rare. It was taken sparingly by Mr Gray and myself in the extreme north of Lanzarote, during January 1858, as also (a few weeks later) in Hierro. And I subsequently captured several specimens of it on the mountains above S<sup>ta</sup> Cruz, in Teneriffe. Its near resemblance *primâ facie* to the *Eunops impressicollis* renders it liable to be overlooked amongst the hosts of that insect with which it usually lives in society, nevertheless its longer elytra and different antennæ will, on a closer inspection (apart from all the other distinctions fully pointed out in my paper above referred to), readily characterize it.

## Genus 92 LÆMOPHLEÛS

(Dejean) Erich, *Nat der Ins. Deutsch* iii 315 (1848)

### 221 Læmophlœus granulatus

Læmophlœus granulatus, *Woll, Ins. Mad* 160 (1854)

— —, *Id, Cat. Mad. Col* 52 (1857)

*Habitat* Canariam, Teneriffam et Palmam, sub cortice arborum præsertim in regionibus sylvaticis, hinc inde haud infrequens

The *L. granulatus*, which occurs in the wooded regions of Madeira, is found in similar localities in these islands,—rarely descending below the forest-districts. I have taken it in Grand Canary, Teneriffe, and Palma, in the last of which it was also found by Mr Gray. My Teneriffan specimens are from beneath bark on the densely clad mountains above Teganana (where the species is comparatively common), the Agua Garcia, and the Agua Mansa.

### 222 Læmophlœus clavicollis

Læmophlœus clavicollis et vermiculatus, *Woll, Ins. Mad* 161 et 163 (1854)

— — et — —, *Id, Cat. Mad. Col* 52 et 53 (1857)

— —, *Woll, Trans. Ent. Soc. Lond.* (3rd series) i 150 (1862)

*Habitat* insulas omnes Canarienses, sub cortice arborum et plantarum (præsertim *Euphorbium*) latens

The present insect appears to be identical with the Madeiran *L. clavicollis* and *vermiculatus*,—the latter of which cannot, I believe, be kept distinct from the former, and must consequently be suppressed. It is *universal* throughout the Canarian archipelago, for although I did not happen to observe it in Gomera, I have examined a specimen which was found in that island, during the spring of 1862, by Dr Crotch. In the other six islands of the Group I have myself captured it, in various situations and altitudes, and it was met with in Hierro

by Mr Gray It occurs principally under the loose outer fibre of the Euphorbias, though it may be taken from beneath the bark of trees likewise My Fuerteventuran specimens are from the Rio Palmas and the little island of Lobos in the Bocayna Strait, the Teneriffan ones from Orotava, the Agua Mansa, the Agua Garcia, Taganana, and the mountains above S<sup>a</sup> Cruz, and the Palman ones from the Barranco de Galga

### 223 *Læmophloeus pusillus*

*Cucujus pusillus*, *Schön*, *Syn Ins* iii 55 (1817)

*Læmophloeus pusillus*, *Erich*, *Nat der Ins Deutsch* iii 321 (1848)

— —, *Woll*, *Ins Mad* 162 (1854)

— —, *Id*, *Cat Mad Col* 52 (1857)

*Habitat* in oppidis Canariæ et Teneriffæ, forsan cum frumentarius in insulas introductus

This little *Læmophloeus*—at once distinguished from the last species (apart from all other characters) by its *subquadrate* prothorax—is doubtless an importation into these islands, in like manner as it is at Madeira I have taken it (in a house) at Las Palmas of Grand Canary, and also at S<sup>a</sup> Cruz of Teneriffe

### Genus 93 *PEDIACUS*

Shuckard, *Elem of Brit Ent* i 185 (1839)

### 224 *Pediacus tabellatus*, n sp

*P* parallelus, planus, rufo-ferrugineus, subnitidus, minute pubescens, capite prothoraceque distincte sed vix dense punctulatis, illo triangulari antice bisulcato oculis magnis prominentibus, hoc subquadrate ad latera 4-angulato-denticulato in disco longitudinaliter bisulcato, elytris vix clarioribus, leviter et dense punctulatis, margine sublaterali paulo elevato, antennis brevibus crassis, obscurioribus—Long corp lin vix 2

*Habitat* Teneriffam sylvaticam, sub cortice ad Agua Mansa semel lectus

I am far from satisfied that this insect is more than a geographical state of the European *P depressus* Nevertheless, judging from a German example of that species now before me, which has been communicated from Berlin by Dr Schaum, the Teneriffan one appears to be a trifle larger and broader, with its head just perceptibly more convex, and with its prothorax (which has the two wide but shallow depressions down its disc *continuous*, instead of being obscurely broken up into four impressions) a little more developed, with the lateral edges less conspicuously thickened, with the anterior angles somewhat more obtusely rounded off and with the four denticles smaller

or more obsolete Its scutellum, also, is perhaps a little less transverse, and the last three joints of its antennæ are, if anything, a trifle less incrassated It is apparently very rare, the only specimen which has come beneath my notice having been captured by myself from under the bark of a felled Spanish chestnut-tree at the Agua Mansa in Teneriffe

#### Genus 94 **XENOSCELIS\***

Wollaston, *Trans Ent Soc Lond* (3rd series) 1 151 (1862)

#### 225 **Xenoscelis deplanata**

*Pristoscelis deplanatus*, Woll, *loc cit* 152 pl 7 f 3 (1862)

*Habitat* in Teneriffa, Palma et Hierro, sub cortice *Euphorbia* um laxo arido præsertim latitans

This curious insect, so remarkable for the serrations along the inner edge of its hinder male-tibiæ, seems to be almost peculiar (so far as observed hitherto) to the dead *Euphorbia*-stems,—beneath the loose outer fibre of which it resides In such positions it was taken by Mr Gray, on the ascent to Valverde, on the eastern side of Hierro, and by myself (more abundantly) in the lower part of the district of El Golfo, on the western side of the same island Subsequently I found a single specimen (beneath the bark of a pine-tree) on the mountains above S<sup>ta</sup> Cruz, in Palma, and another below Taganana, in Teneriffe

#### Genus 95 **SILVANUS**

Latreille, *Gen Crust et Ins* iii 19 (1807)

#### 226 **Silvanus dentatus**

*Corticaria dentata*, Mshn, *Ent Brit* 1 108 (1802)

*Silvanus dentatus*, Steph, *Ill Brit Ent* iii 104 (1830)

— —, Woll, *Ins Mad* 167 (1854)

— —, Id, *Cat Mad Col* 54 (1857)

*Habitat* in domibus Lanzarotæ, Teneriffæ et Gomeræ, certe introductus

Only four Canarian specimens of this insect (which is undoubtedly an importation unto these islands, no less than it is at Madeira) have as yet come beneath my notice Two of them were taken by myself,—one (dead) in a house in Lanzarote, and the other (likewise dead) in a similar position at Ycod el Alto of Teneriffe, and the remaining two by Dr Crotch in Gomera

\* I have changed the title of this genus, from *Pristoscelis*, to *Xenoscelis*, inasmuch as I have lately been informed by Mr Pascoe that the former name was preoccupied by Dr Leconte

227 *Silvanus surinamensis*

*Dermestes surinamensis*, *Lin*, *Syst Nat* 1 2 565 (1767)

*Anobium frumentarium*, *Fab*, *Mant Ins* 1 39 (1787)

*Dermestes 6-dentatus*, *Fab*, *Ent Syst* 1 232 (1792)

*Silvanus surinamensis*, *Steph*, *Ill Brit Ent* iii 104 (1830)

—, *Woll*, *Ins Mad* 167 (1854)

—, *Id*, *Cat Mad Col* 54 (1857)

*Habitat* in Lanzarota, Fuerteventura, Canaria, Palma et Hierro, in domibus, granariis et sub recremento farris circa basin acervorum tritici sparso, certe introductus

This almost cosmopolitan insect has clearly been naturalized in these islands through the medium of commerce, in like manner as it has at Madeira. There can be no doubt that it is universal throughout the archipelago, nevertheless I happen hitherto to have observed it only in Lanzarote, Fuerteventura, Grand Canary, Palma, and Hierro (in the last of which it was also found by Mr Gray). It is often common about houses and granaries, but abounds more particularly beneath the refuse around the base of corn-stacks, in which situation I have captured it in profusion at Hania, in the north of Lanzarote.

228 *Silvanus nubigena*

*S. angusto-elongatus*, subconvexus, fusco-niger, dense flavescenscinereo-pubescent, capite prothoraceque rugose punctatis, hâc æquali, angusto, subcylindrico, postice vix angustiore, ad latera subrecto et distincte crenulato, angulis ipsis posticis obtusis sed argute determinatis, penicillatis, elytris rugose et dense seriatim punctatis, versus humeros interdum paulo fusciscentioribus, femoribus piceis, antennis, tibus tarsisque piceo-ferrugineis. — Long corp. lin 1-1½

*Silvanus nubigena*, *Woll*, *Ann Nat Hist* (3rd series) xi 217 (1863)

*Habitat* in editioribus aridis Teneriffæ, inter lapillos ramulosque emortuos sub arbusculis *Spartu nubigenæ* humi jacentibus velocissime currens, necnon fere ad 9000' s m ascendens

In its general *facies*, colour, clothing, and outline, no less than in its unfoveolated prothorax and almost unclavated antennæ, the present very interesting and truly indigenous *Silvanus* has much in common with the European *S. elongatus*, nevertheless when closely inspected it will be seen to differ in many respects from that insect. Thus, apart from all other characters, it may immediately be known from it by its much slenderer tarsi, the antepenultimate joint of which is scarcely at all dilated or bilobed. In minor respects it is altogether a little smaller and narrower than the *S. elongatus*, its colour (especially of the limbs) is considerably browner (its shoulders

being often still more diluted, or subrufescent), its pubescence has a more conspicuously golden tinge, its prothorax more particularly is narrower, straighter at the sides, and (together with the head) more closely and roughly punctured, its legs are shorter and less robust, and its antennæ are less incrassated towards their extremity. In its habits it is very peculiar, being confined apparently to the dry elevated cindery districts of Teneriffe which are characterized by the presence of the "Retama" (or *Spartum nubigena*)—from about 6000 to perhaps 9000 feet above the sea,—where it occurs amongst the small stones and rotten sticks which accumulate around the roots of that remarkable Broom, running with the greatest velocity. In such situations I took it, not uncommonly, during May of 1859, both on the lofty Cumbie (adjoining the Cañadas) above Ycod el Alto and on the opposite range (likewise clothed with Retamas) above the Agua Mansa.

## Fam. 17. TELMATOPHILIDÆ.

### Genus 96 DIPHYLLUS

Stephens, *Ill Brit Ent* iii 87 [script *Biphyllus*] (1830)

#### 229 *Diphyllus lunatus*

*Dermestes lunatus*, *Fab, Ent Syst* i 232 (1792)

*Biphyllus lunatus*, *Steph, Ill Brit Ent* iii 78 (1830)

*Diphyllus lunatus*, *Redt, Fna Austri* 188 (1849)

———, *Woll, Ins Mad* 172 (1854)

*Biphyllus lunatus*, *Id, Cat Mad Col* 51 (1857)

*Habitat* Palmam sylvaticam, ad truncum arboris vetustum in Barrianco da Agua, Maio exeunte a d 1858, sat copiose lectus

This European insect (which occurs rarely at Madeira) appears to be very scarce, or at all events local, in the Canaries. The only island in which I have hitherto observed it is Palma, where, at the end of May 1858, I captured several specimens from off the trunk of an old laurel high up in the Barrianco da Agua.

### Genus 97 THALLESTUS

Wollaston, *Trans Ent Soc Lond* (3rd series) i 153 (1862)

#### 230 *Thallestus subellipticus*

*Thallestus subellipticus*, *Woll, loc cit* 155 pl 7 f 4 (1862)

*Habitat* Teneriffam e plantis putridis *Euphorbiæ canariensis* in montibus supra Sanctam Crucem parce captus

For the peculiarities of *Thallestus*, and the distinctions between

the present species and the following one, I must refer to my Paper on the "*Euphorbia*-infesting Coleoptera of the Canaries" which has been lately published in the 'Transactions of the Entomological Society of London'. The *T. subellipticus* seems to be decidedly rare, though possibly it might occur in considerable abundance were the rotten stalks of the *Euphorbia canariensis* to be well searched. The only specimens which I have seen were captured by myself, in the putrid stems of the above-mentioned plant, on the mountains above Sta Cruz of Teneriffe, in the direction of Las Mercedes.

### 231 *Thallestus typhæoides*.

*Thallestus typhæoides*, Woll, *loc cit* 155 pl 7 f 6 (1862)

*Habitat* Gomera, e plantis *Euphorbiæ canariensis* putridis in montibus supra San Sebastian mense Februario a d 1858 lectus

The present *Thallestus* has precisely the same habits as the last one, but was found in Gomera instead of Teneriffe, and in considerable abundance. I captured it, early in February 1858, from out of the putrid stems of *Euphorbia canariensis* on a hill-top to the north of San Sebastian.

## Fam. 18. CRYPTOPHAGIDÆ.

### Genus 98 CRYPTOPHAGUS

Herbst, *Kaf* iv 172 [script *Kryptophagus*] (1792)

### 232 *Cryptophagus dentatus*

*Kateretes dentatus*, *Hbst*, *Kaf* v 15 tab 45 f 6 (1793)

*Cryptophagus dentatus*, *Erich*, *Nat der Ins Deutsch* iii 364 (1848)

—, *Woll*, *Cat Mad Col* 56 (1857)

*Habitat* Lanzarotam, Fuerteventuram, Teneriffam et Palmam, passim

The European *C. dentatus* appears to have established itself completely at the Canaries, in like manner as it has at Madeira,—being found not only about houses and granaries, but also in positions far removed from the towns. I have taken it under the refuse at the base of corn-stacks in Lanzarote, from beneath camels' dung in the Rio Palmas of Fuerteventura, from under the bark of trees at the Agua Garcia and the Agua Mansa of Teneriffe, and in similar positions in Palma. It is a variable insect, both in size and colour—assuming sometimes, particularly in sylvan spots, a dark-brownish hue, but its rather elongate outline and the shape of its prothorax will always serve to identify it.

233 *Cryptophagus affinis*.

*Cryptophagus affinis*, Sturm, *Deutsch Ent*, xvi 79 t 314 f C (1845)

———, Ench, *Nat der Ins Deutsch* iii 360 (1848)

———, Woll, *Ins Mad* 170 (1854)

———, *Id*, *Cat Mad Col* 57 (1857)

*Habitat* in domibus Teneriffæ et Hierro, minus frequens sed certe introductus

For the exact distinctions between the present species and the last one I must refer to my Madeiran Catalogue (cited above) The *C affinis*, so far as I have observed hitherto, occurs (as in Madeira) exclusively about houses—being clearly an imported insect into these islands In such positions I have taken it at St<sup>a</sup> Cruz and Orotava in Teneriffe, and at Valverde in Hierro,—in the former of which islands it was also captured by Mr Gray and Dr Crotch

234 *Cryptophagus obesus*, n sp

*C* breviter oblongus, fusco-ferugineus, pube sat elongatâ vix depressâ dense vestitus, prothorace subopaco, valde profunde et dense punctato, ad latera subrotundato, denticulo medio acuto, elytris paulo clarioribus, oblongis, dense punctatis —Long corp lin  $\frac{3}{4}$ —1

*Habitat* Lanzarotam et Fuerteventuram, in illâ sub recremento farris circa basin acervorum tritici sparso, sed in hac etiam sub stercore camelino ad Rio Palmas captus

From the *C affinis* the present *Cryptophagus* may be known by its rather smaller size, relatively more deeply and closely punctured surface, and by its (subopake) prothorax having the anterior ridge and central denticle less prominent or defined The space, moreover, between the latter and the hinder angle is more coarsely crenulated Small examples of it might sometimes be almost confounded, at first sight, with the following species, nevertheless it is certainly distinct from that insect It may be known from it by being on the average rather larger, broader, and more parallel, by its pubescence being a little longer, denser, and less depressed, by its punctuation being altogether somewhat deeper, and closer, by its prothorax being *proportionally* a trifle wider, shorter, and less straightened at the sides, and by its wings being fully developed I may add that it was examined by Dr Knaatz, who regarded it as new I have taken it rather commonly from beneath the refuse around the base of corn-stacks at Hama, in the north of Lanzarote, and from under camels' dung in the Rio Palmas of Fuerteventura,—to which two islands it would seem (so far at least as has been observed hitherto) to be peculiar In Lanzarote it was likewise found by Mr Gray

235 *Cryptophagus fusiformis*

*C. oblongo-fusiformis*, angustulus, fusco-ferrugineus, pube minus elongatâ subdepressâ vestitus, prothorace profunde et dense punctato, ad latera subrecto, denticulo medio acuto, elytris subfusiformibus (i.e. antice et postice subattenuatis, vel ibidem utrinque oblique subtruncatis), sat dense punctatis, alis obsoletis — Long corp. lin.  $vix \frac{3}{4}$

*Cryptophagus fusiformis*, Woll., *Trans. Ent. Soc. Lond.* (3rd series) 1: 156 (1862)

*Habitat* Teneriffam, præcipue sub cortice *Euphorbiarum* in montibus supra Sanctam Crucem crescentium deprehensus

As already stated, the present *Cryptophagus* has something in common, at first sight, with the last one, nevertheless its rather smaller size and relatively narrower and more fusiform outline (the elytra particularly being less parallel, or subattenuated both before and behind), in conjunction with its somewhat shorter and more depressed pubescence, its rather less deeply punctured surface, and the straighter sides of its prothorax, will serve to distinguish it from that species. It is often, also, of a browner hue,—the elytra being but seldom of a clearer colour than the head and prothorax, and (which is very unusual for a *Cryptophagus*) its wings are obsolete. In its habits, too, it recedes from the *C. obesulus*, and is more strictly indigenous. I have taken it hitherto only in Teneriffe, in spots far removed from habitations,—such as at Las Mercedes, and from beneath the dead bark of Euphorbias on the mountains above Sta Cruz, overlooking the plain of Laguna.

236 *Cryptophagus hesperius*.

*C. fusiformi-oblongus*, rufo-ferrugineus, pube brevi albidâ parce vestitus, prothorace profunde et dense punctato, postice angustato, angulis anticis amplatis, ad latera denticulis acutis circa 4-5 armato, elytris subfusiformibus, sat dense punctatis, antennis pedibusque longiusculis, gracilisculis,  $vix$  pallidioribus

*Var.* colore obscuriore, in elytris interdum etiam nigro-brunneo. *Var. β occidentalis* [an species distincta?] prothoracis denticulis obsoletis, elytris magis fusiformibus convexis, ad humeros paulo magis rotundatis — Long corp. lin.  $\frac{2}{3}$  —  $\frac{3}{4}$

*Cryptophagus hesperius*, Woll., *Ann. Nat. Hist.* (3rd series) xi: 217 (1863)

*Habitat* in sylvaticis et subsylvaticis Canariæ Teneriffæ, Gomeræ et Palmæ, vulgaris. *varietatis β* exemplar unicum, in ins. Hierro captum, solum vidi

In its small size, rather elongate and slender limbs, and general

aspect, the present insect is more suggestive, at first sight, of a *Paramecosoma* than of a *Cryptophagus*, and as such it was regarded by Dr Kraatz, on a superficial examination of it two years ago. Nevertheless there can be no question that it is, in reality, a true *Cryptophagus*, since the hinder feet of its males (almost the only structural character of importance which distinguishes that genus from *Paramecosoma*) are most conspicuously tetramerous,—of which I have thoroughly convinced myself by mounting the posterior legs of both sexes in balsam, for the microscope. It is, in point of fact, nearly related to the common European *C. vini*—not only in the shape of its basally-narrowed prothorax, but also in its comparatively minute size, nevertheless it is, on the average, a little smaller still than that species, its prothorax is rather more closely punctured, with its hinder angles more evidently right angles, and its elytra are somewhat more fusiform—being rounder at the sides, or more perceptibly narrowed at either extremity. The form of its prothorax will, even alone, at once separate it from all the foregoing *Cryptophagi*—being comparatively more attenuated posteriorly and wider in front, with the anterior angles a good deal developed (or obliquely-thickened), and with the lateral margin armed with four or five small, acute, subequal teeth.

The *C. hesperus* is universal in the sylvan and subsylvan districts of Grand Canary, Teneriffe, Gomera, and Palma. In the first of these I have taken it more particularly throughout the region of El Monte, in the second, at Taganana, Las Mercedes, La Esperanza, the Agua Garcia, and Souzal, and in the fourth, about the wooded slopes of the Barranco da Agua and Galga. It was found by Dr Crotch, also, at Hermigua in Gomera. When in the island of Hierro I captured a single specimen which has its prothoracic denticles obsolete, and its elytra more fusiform, or rounded at the sides, and I have treated it as a “*var β*” of the present insect,—at the same time giving it a name, in the event of further material proving it hereafter to be specifically distinct.

#### (Subgenus?) 99 MNIONOMUS

*Corpus* ellipticum, apterum *prothorace* subconico, basi bisinuato, angulis posticis subproductis *mesosterno* in medio canaliculato *antennis pedibusque* crassis, *tarsis* articulo primo breviusculo, *anterioribus* subtus dense pilosis

#### 237 *Mnionomus ellipticus*, n. sp.

*M. fusco-ferrugineus*, convexus, nitidus, pube brevi depressâ flavo-albidâ parce vestitus, punctatus, prothorace longiusculo, ad latera

subrecto et denticulo medio acuto minutissimo armato, angulis anticeis vix incrassatis, elytris ad basin prothorace haud latioribus, pone basin rotundatis, inde ad apicem leviter acutioribus et ad apicem paulo dilutioribus, antennis pedibusque rufo-testaceis —Long. corp. lin. vix  $1\frac{1}{2}$

*Habitat* Teneriffam sylvaticam, inter muscos et humi sub foliis marcidis in lauretis ad Las Mercedes et Agua Garcia repertus

Until I had examined accurately this curious insect I had failed entirely to identify it with *Cryptophagus*,—its convex, elliptic, apertous body and comparatively shining surface, in conjunction with its thickened limbs and subconical prothorax (which is wide behind—where it is of the same breadth as the base of the elytra—and bisinuated along its posterior margin, causing the hinder angles to be slightly produced), giving it a *prima facie* appearance totally distinct from any of the representatives of that genus with which I am acquainted. Nevertheless, after a careful dissection of it, and a consideration of the various details of its structure, I cannot detect a single character, apart from the above-mentioned external ones, to justify its *entire* isolation. Its oral organs indeed are all of them precisely identical with those of the normal *Cryptophagus*, its hinder male-tarsi are tetramerous, and its prothorax when closely inspected will be seen to have its anterior angles slightly incrassated into the ordinary oblique ridge, and to be armed at about the middle of its lateral margins with a very minute denticle. Yet, whilst thus agreeing in every essential point with *Cryptophagus*, its outward characters cannot but stamp it as a most anomalous member of that Group,—since (in addition to its very peculiar *facies*) the completely apterous state of its body and the somewhat shortened first joint of its feet (the two anterior pair of which are densely pilose beneath) are features of considerable importance. Its under-segments are purely on the *Cryptophagus*-type, except that the mesosternum is more evidently channeled.

The *M. ellipticus* is apparently extremely rare, and confined (so far as I have observed hitherto) to the sylvan regions of Teneriffe. I have taken it sparingly, under fallen leaves, at the Agua Garcia, and (rather more commonly), amongst wet moss and vegetable detritus, on the steep sloping bank immediately to the left of the small waterfall in the wood of Las Mercedes.

#### Genus 100 **LEUCOHIMATIUM**

Rosenhauer, *Die Thiere Andalus.* 179 (1856)

*Corpus* elongatum, angustum, parallelum, *capite* sat magno *protho-*

*face* ad angulos anticos incrassato-ampliato necnon ad latera plus minus minutissime crenulato. *Antennæ* et *instrumenta cibaria* fere ut in generibus *Cryptophago* et *Paramecosomate*, sed *mandibulis* ad apicem grosse et longe bifidis necnon ad basin externam anguste incis, *palporum maxillarum articulo basilar* minuto (nec elongato flexuoso), *secundo* elongato curvato clavato (nec brevi, sequentis longitudine), *ultimo* longissimo, et *mento* ad apicem haud emarginato, sed in parte mediâ producto et ibidem obtuse rotundato. *Pedes* ut in *Paramecosomate*, *1 e tarsi* in utroque sexu 5-articulatis, articulo penultimo minuto.

As may be gathered from the above comparative diagnosis (drawn out from the European *L. elongatum*, described below), I believe that *Leucohimatium* possesses sufficient structural peculiarities of its own (as Dr Kraatz has suggested—*vide* 'Berliner Ent Zeitsch.' 1 190) to warrant its separation from *Paramecosoma*. M Jacq Duval indeed, in his 'Genera des Coléopt d'Europe,' has not adopted it, but, apart from its differences of external *facies* (which are very considerable, and would of themselves incline us to suspect the presence of other less obvious ones), its very conspicuously and deeply bifid mandibles, in conjunction with the particular proportions (alluded to above) of the joints of its maxillary palpi, and its unemarginated, centrally-produced mentum, are, I think, more than enough to render its isolation both natural and desirable.

### 238 *Leucohimatium elongatum*

*L. fusco-ferrugineum*, albido-pubescent, capite prothoraceque sat parce punctatis, hâc subquadrato postice paulo angustiore, angulis anticis oblique incrassatis, ad latera minutissime crenulato, basi utrinque foveolâ obscurâ punctiformi notato, elytris subtiliter striato-punctatis, interstitiis uniseriatis punctulatis.—Long corp lin  $1\frac{1}{2}$

*Paramecosoma elongata*, Sturm, *Deutsch. Entom. Fauna*, xviii 72 pl 342 f a, A (1846)

———, Erich, *Nat. der Ins. Deutsch.* iii 371 (1848)

*Leucohimatium angustum*, Rosenh., *Die Thiere Andalus* 179 (1856)

*Habitat* Palmam occidentalem, in regione calcareâ mox infra Argual sitâ Junio ineunte a d 1858 specimen unicum sub lapide inveni

A single specimen of the European *L. elongatum* was captured by myself, from beneath a stone, on the calcareous plain immediately below Argual, on the western side of Palma, early in June 1858. It occurs also, though very rarely, in Madeira,—two examples having lately been detected by Mr F A Anderson, on the hills above Funchal.

Genus 101 **PARAMECOSOMA**Curtis, in *Ent Mag* 1 186 (1833)239 **Paramecosoma simplex***Paramecosoma simplex*, Woll, *Cat Mad Col* 59 (1857)

*Habitat* Fuerteventuram et Gomeram, in illâ sub stercore camelino ad Rio Palmas mense April ineunte a d 1859 tria specimina deprehensi, in hac cepit Dom Crotch

This insect, which is rather common (amongst vegetable refuse) around Funchal in Madeira, and which has so much the *prima facie* aspect of a *Cryptophagus* or a *Typhæa*, is apparently scarce at the Canaries, though possibly it may be only local, having hitherto escaped our observation. At any rate I have myself taken, hitherto, but three examples—namely, under camels' dung, in the Rio Palmas of Fuerteventura, at the beginning of April 1859. Four more, however, were captured by Dr Crotch, during the spring of 1862, at Hermigua in Gomera.

Genus 102 **HYPOCOPRUS**Motschulsky, *Bull de Moscou*, 72 (1839) [script *Upocopus*]240 **Hypocoprus Hochuthu***Myrmecinomus Hochuthu*, Chaud, *Bull de Moscou*, 11 206 (1845)*Monotoma caucasicum*, Kolen, *Melet Ent* 111 43 (1845)*Habitat* Teneriffam, a W D Crotch semel captus

A single example of this minute insect was taken by Dr Crotch in Teneriffe, during the spring of 1862. I can detect no appreciable difference in it from the European *H Hochuthu*, unless perhaps the prothorax be a trifle more remotely punctured, and rather more impressed in the centre behind.

Regarding the affinities of *Hypocoprus*, I believe that it has nothing whatever to do, except in external *facies*, with *Monotoma* (despite the assertion of M Jacq Duval, who appears to have mistaken the structural features of the latter), but that all its details tend rather to associate it with *Paramecosoma*, *Leucohimatum*, and *Atomaria*. Indeed the proportions of its antennæ, with their lax triarticulate club and *unequal* intermediate joints, in conjunction with its slender limbs and pentamerous feet, are (apart from minor details) far more suggestive of the *Atomariæ* than of the thick-limbed, tetramerous *Monotomæ*, with their 10-articulated antennæ and compact, one-jointed club.

Genus 103 **ATOMARIA.**(Kunby) Steph, *Ill Brit Ent* 111 64 (1830)

241 *Atomaria pilosula*, n sp

*A* oblongo-ovata, rufo-ferruginea, punctata, pube longiusculâ minus depressâ (partim etiam suberectâ) albidâ vestita, prothorace convexo, ad basin ipsissimam transversim constricto, ad latera subæqualiter rotundato, elytris convexis, fere concoloribus, pygidium vix tegentibus — Long corp lin vix  $\frac{7}{8}$

*Habitat* editiores Teneriffæ, in excelsis illis “Cumbre v Cañadas” dictis, semel capta

Although I have, unfortunately, but a single specimen of this *Atomaria* to form an opinion from, I believe nevertheless that it is the exponent of a species truly distinct from the following one,—a supposition which is rendered the more probable from the fact of its having been captured on the lofty Cumbre of Teneriffe, adjoining the Cañadas, upwards of 8000 feet above the sea, whereas the *A canariensis* is peculiar (so far as observed hitherto) to rather low and intermediate districts. Judging from the unique example now before me, the *A pilosula* differs from the *canariensis* in being a little larger and more ovate (or less straightened at the sides), in having its pubescence longer and less depressed, in its punctation being a trifle less dense, in its scutellum being relatively somewhat wider and more transverse, and in its prothorax and elytra being each of them more convex. In the individual from which my diagnosis is drawn out there is, also, scarcely any indication of the suffused transverse elytral fascia, or cloud, which (more or less) characterizes its ally, but very likely this may be merely accidental.

242 *Atomaria canariensis*, n sp

*A* suboblonga, rufo-ferruginea, punctata, pube brevi depressâ albidâ vestita, prothorace ad basin ipsissimam transversim paulo constricto, ad latera subæqualiter rotundato, elytris fasciâ mediâ magnâ plerumque valde indistinctâ suffusâ nigrescente nebulosis. *Variat* fasciâ obsoletâ (elytris fere omnino rufo-ferrugineis) — Long corp lin  $\frac{2}{3}$ —vix  $\frac{3}{4}$

*Habitat* insulas omnes Canarienses, in locis inferioribus et intermediis, passim.

The present *Atomaria* has somewhat the general aspect of the common European *A atricapilla*, nevertheless it is on the average a trifle larger and more pubescent than that insect, its punctation is denser its prothorax is both more and less regularly rounded at the sides, its head is never dark (being always concolorous with the rest of the surface), and its elytra are obscurely adorned with a large, ill-defined, suffused transverse fascia or cloud,—which, although often

very faintly expressed, is rarely quite absent in perfectly matured specimens. From the European *A. unifasciata* (which in colouring it slightly resembles) it is abundantly distinct, in all its features, but with the *A. contaminata* of Erichson it may perhaps have a greater affinity. It is *universal* throughout the archipelago. I have taken it (more or less abundantly) in the whole of the seven islands except Fuerteventura, and there is a single specimen now before me which I have found amongst the Coleoptera collected by Mr Gray in that island. It is clearly more common in the central and western portions of the Group than in the eastern ones, and more general in subsylvan spots of intermediate elevations than elsewhere. It occurs, however, in the lowest districts also, but I have not detected it hitherto *above* the altitude of about 2500 feet. Thus, in Lanzarote, I have captured it near Haria, in Grand Canary, throughout the region of El Monte, in Teneriffe (where it was found also by Dr Crotch), around Sta Cruz, the Puerto Orotava, the Agua Garcia, Souzal, &c, in Gomera, above San Sebastian, in Palma, on grassy slopes in the eastern Barrancos, and in Hierro, about Valverde.

#### 243 *Atomaria ruficollis*, n. sp.

*A. ovalis*, punctata, pube brevissimâ depressâ albidâ parce vestita capite prothoraceque læte ferrugineo-rufis, hinc ad basin ipsissimam vix transversim constricto, ad latera æqualiter rotundato, elytris convexis, nigris, ad apicem subacutis et ibidem paulo dilutioribus, antennis crassis, rufo-ferrugineis, pedibus rufo-testaceis.—Long corp. lin.  $\frac{2}{3}$ .

*Habitat* Teneriffam sylvaticam, sub foliis marcidis humi latens.

In the colouring of its rufous head and prothorax and dark elytra, no less than in its shining and but very slightly pubescent surface and its thickened antennæ, the present beautiful and very distinct *Atomaria* is a good deal suggestive of the European *A. nigripennis*. It is, however, smaller, and relatively shorter (or more oval) than that insect, its punctuation and pubescence are slightly coarser and denser, its prothorax is wider and less constricted behind, and less margined at the sides, and its antennal club is a little more abrupt. It is decidedly rare, and confined (so far as I have observed hitherto) to the sylvan districts of Teneriffe. I have taken it sparingly in the forest, at the edges of the Vueltas, above Taganana, and (more abundantly), from beneath damp leaves, on the steep, sloping bank immediately to the left of the small waterfall in the wood of Las Mercedes. A single specimen, also from Teneriffe, has lately been communicated by Dr Crotch.

Genus 104 **EPISTEMUS.**(Westwood) Steph, *Ill Brit Ent* 11 167 [script *Ephistemus*] (1829)244 **Epistemus gyrinoides**Dermeestes gyrinoides, *Mshn, Ent Brit* 1 77 (1802)Phalacius dimidiatus, *Sturm, Deutsch Fna*, 11 85 t 32 f D (1807)Ephistemus gyrinoides, *Steph, Ill Brit Ent* 11 168 (1829)— dimidiatus, *Woll, Ins Mad* 176 (1854)— gyrinoides, *Id, Cat Mad Col* 63 (1857)*Habitat* in Canaria, Teneriffa et Gomera, rarissimus

The few examples of the *E gyrinoides* which I have seen hitherto from these islands have the minute and distant punctules of their upper surface still less evident, beneath the microscope, than is the case in the ordinary European ones and in those from Madeira—being, in fact, scarcely distinguishable, nevertheless I cannot detect any character to warrant their separation from that species. I have taken it sparingly at Teror, in Grand Canary, as also near St<sup>a</sup> Cruz, and at the Agua Mansa, of Teneriffe, in which latter island, as well as in Gomera, it was found by Dr Crotch

**Fam. 19. LATHRIDIADÆ.**Genus 105 **HOLOPARAMECUS**Curtis, in *Ent Mag* 1 186 (1833)§ I *Antennæ 11-articulatæ*245 **Holoparamecus caularum**

*H* rufo-testaceus, nitidus, subtilissime et parce pubescens, oculis sat magnis, prothorace antice lato, postice constricto, angulis posticis rectis, basi in medio late et fortiter transverse signato, elytris minute punctulatis, striâ suturali rectâ in utroque impressâ — Long corp lin vix  $\frac{2}{3}$

*Calyptobium caularum*, *Aube, Ann de la Soc Ent de France*, (2<sup>me</sup> série) 1 244 pl x f 2 (1843)

— — —, *Redt, Fna Austr* 204 (1849)

*Habitat* Lanzarotam, sub quisquilis prope oppidum Haria repertus

The present European *Holoparamecus* belongs, like the *H niger*, to the Section of the genus in which the antennæ are 11-articulate. It may, however, be known from the latter by being a little larger, paler, and relatively more elongate, by its prothorax being wider in front, and much more conspicuously embossed in the centre behind, and by its sutural line being somewhat straighter. The example

described from, which I captured beneath vegetable refuse near Hama, in the north of Lanzarote, agrees precisely with a type of the *H caularum* communicated to me some time ago by Dr Aubé

### 246 *Holoparamecus niger*.

*Calyptobium nigrum*, *Chevrier, in litt*

—, *Aube, Ann de la Soc Ent de France*, (2<sup>ème</sup> série) 1 246 (1843)

*Holoparamecus niger*, *Woll, Ins Mad* 182 (1854)

—, *Id, Cat Mad Col* 64 (1857)

*Habitat* Teneriffam duo specimina, tempore vernali a d 1862, cepit Dom Crotch

Of the *H niger*, which is universal throughout Madeira and Porto Santo, I have seen as yet but two Canarian examples. They were taken by Dr Crotch in Teneriffe, during the spring of 1862. The characters which distinguish the species from the *H caularum* have already been indicated. When viewed beneath a high magnifying power, the Canarian specimens of this insect (judging from the pair now before me) will be perceived to be a trifle more glabrous than the Madeiran ones (the excessively minute pubescence being, if possible, even still less traceable), also their elytra are a little less expanded before the middle, which causes the shoulders to appear somewhat less obliquely rounded-off but I am satisfied that these very slight differences cannot be indicative, at the utmost, of more than an unimportant topographical state

## § II *Antennæ 9- et 10-articulatæ*

### 247 *Holoparamecus singularis*

*H* subdepressus, rufo-testaceus, subnitidus, subtiliter et minus parce pubescens, oculis minutissimis, prothorace antice latiusculo, postice angustiore sed haud constricto, angulis posticis subobtusis, basi in medio anguste et minus fortiter transverse signato (impressione subuniformi), elytris paulo distinctius punctulatis, striâ suturali rectâ in singulis impressâ — Long. corp. lin  $\frac{1}{2}$

*Silvanus singularis*, *Beck, Beitr zu Bayerisch Insectenf* (1817)

*Amphibolanarzon difficile*, *Vill, Cat Col Eur* 26 (1833)

*Holoparamecus depressus*, *Curt, Ent Mag* 1 186 (1833)

—, *Id, Brit Ent* xiii 614 (1836)

*Calyptobium Villæ*, *Aube, Ann de la Soc Ent de France*, (2<sup>ème</sup> série) 1 243 pl x f 1 (1843)

*Habitat* Lanzarotam, in eodem loco ac præcedens semel captus

As may be gathered from the diagnosis, the excessively minute eyes and rather more pubescent, depressed, and less shining surface of this insect, in conjunction with its somewhat less anteriorly-widened and

not so posteriorly-constricted prothorax (which has its basal angles more obtuse, and its hinder central space, between the foveæ, both *narrower* and *much less elevated*, or embossed), will at once serve, apart from the numerical peculiarities of its antennal joints, to distinguish it from the *H caularum*. As regards this latter character indeed, it would appear that whilst some of the individuals of this species have those organs composed of only nine articulations, others have them made up of ten,—a feature which, in all probability, is a sexual one, but so singular a fact has occasioned, not unnaturally, some little confusion in the synonymy—the insect<sup>4</sup> having, in consequence, been described under several different names. In specimens, however, which I have received from the Abbé Stabile of Milan, from Prof Heer of Zurich, and from the late Mr Melly of Liverpool (the *last two* sets of which were labelled as types coming from M Villa, and all of which I believe are specifically identical), there are, in each case, examples falling under both of these categories. In the only Canarian specimen which has as yet come beneath my observation the antennæ are 10-articulate, which thus far, therefore, agrees with (I imagine both sexes of) the *H Kunzei*\*. Nevertheless it could not possibly be confounded with that species, since its smaller size, rather narrower outline, and more pubescent surface, combined with its comparatively diminutive eyes and less posteriorly-constricted and less basally-embossed prothorax, will suffice to separate it therefrom. My unique Canarian example was, like that of the *H caularum*, captured from under vegetable refuse at Hama, in the north of Lanzarote.

### Genus 106 CORTICARIA.

Marsham, *Ent Brit* 1 106 (1802)

#### 248 Corticaria fulva.

*Latridius fulvus* (Cher.), *Villa, Cat Col Eur* 45 (1833)

*Corticaria fulva*, Mann, in *Ger. Zeitsch für die Ent* v 42 (1844)

—, *Holl, Ins Mad* 185 (1854)

—, *Id, Cat Mad Col* 65 (1857)

*Habitat* in domibus Lanzarotæ et Teneriffæ, forsan introducta

The European *C fulva*, remarkable for its pallid hue, coarse pubescence, and rather robust, elongate legs, is apparently scarce in these islands,—where, as in Madeira, it has most probably become

\* It is rather curious that all the *Holoparameri* as yet characterized (four in number) have now been detected in the Atlantic islands,—namely, the *H Kunzei* at Madeira, the *caularum* and *singularis* at the Canaries, and the *niger* in both Groups.

naturalized from more northern latitudes I have taken it sparingly, in and about houses, in Lanzarote and Teneriffe

### 249 *Corticaria maculosa*.

*Corticaria maculosa*, Woll., *Ann of Nat Hist* (31d series) 11 408 (1858)

— — —, *Id*, *Trans Ent Soc Lond* (31d series) 1 156 (1862)

*Habitat* insulas Canarienses, in Canaria Grandi solâ adhuc haud detecta

The *C maculosa*, which I described fully in my Paper on 'Madenian Additions' cited above, may be said without hesitation to be *universal* throughout the archipelago, for although I do not happen to have met with it hitherto in Grand Canary, there cannot be any doubt that it must exist there, no less than in the remaining six islands of the Group,—in all of which I have captured it, more or less abundantly. It occurs in various situations, but is more common, I think, beneath the dry outer fibre of the dead Euphorbias than elsewhere. In such positions I have observed it frequently at Hama, in the north of Lanzarote, as also on the mountains above S<sup>a</sup> Cruz of Teneriffe, and even on the little isle of Lobos, off the extreme north of Fuerteventura. In Fuerteventura itself, however, I brushed it, in considerable numbers, on the 28th of January 1858, from off an old bush of the common Rosemary (*Rosmarinus officinalis*, L.), at Agua Bueyes, and I have taken it out of the crevices of wood (used for a gate) in the Barranco above San Sebastian, of Gomera. It would seem likewise to be independent of elevation, for in Teneriffe I have found it from almost the sea-level (at S<sup>a</sup> Cruz and Puerto Orotava) to the slopes above Taganana, the Agua Mansa, and even to the lofty Cumbre adjoining the Cañadas,—at an altitude of more than 8000 feet\*. In Teneriffe and Gomera it was met with also by Dr Crotch.

The pale hue and dark (though often very obscure, and generally interrupted) postmedial fascia of this *Corticaria* will at once readily distinguish it. Examples, however, in which the elytral patch is quite obsolete (and such are by no means uncommon, particularly where the insect is immature) might almost be confounded, *prima facie*, with those of the *C fulva*, nevertheless they may always be known from the latter by their pubescence being shorter and less coarse, by their prothoracic fovea being somewhat shallower, by their elytra being

\* The single example which I detected at this great elevation has its pubescence a trifle longer and coarser than is the case in the ordinary ones, but I can see nothing about it to warrant the suspicion that it is specifically distinct

rather more evidently ovate (instead of oblong-oval), and by their legs being proportionally a little shorter and slenderer. The species, too, is on the average decidedly smaller than the *C. fulva*.

### 250 *Corticaria serrata*.

- Dermostes serratus*, Payk., *Fna Suec* i 300 (1798)  
*Latidius serratus*, Gyll., *Ins Suec* iv 126 (1827)  
*Corticaria serrata*, Mann, in *Ger m Zeitsch* v 28 (1844)  
 — *rotulicollis*, Woll., *Ins Mad* 184 (1854)  
 — —, *Id*, *Cat Mad Col* 64 (1857)

*Habitat* in Lanzarota, Fuerteventura, Teneriffa et Hierro, in domibus, granariis et præsertim sub recremento farinis circa basin acevorum tritici spaiso, vulgaris

A more recent and careful comparison has convinced me that the *Corticaria* which I described in my 'Insecta Maderensia' under the specific name of *rotulicollis* is coincident with the European *C. serrata*, and I have therefore corrected the synonymy accordingly. Although hitherto I have taken the *C. serrata* only in Lanzarote, Fuerteventura, Teneriffe, and Hierro, I have but little doubt that it is universal throughout the archipelago, for as it has every appearance of having been naturalized from more northern latitudes (occurring principally about houses and granaries\*), it is pretty certain that it will be found equally in all the islands if only searched for in its proper situations. It is beneath the refuse around the base of corn-stacks that it is principally to be met with, where it usually resides in company with the *Trogosita mauritanica*, *Silvanus sumnemensis*, *Cryptophagus dentatus*, *Aglenus brunneus*, *Tenebrio obscurus*, and similar introduced species. Under such circumstances I have observed it in the greatest profusion at Hama, in the north of Lanzarote, and, during February 1858, I brushed it, in scarcely less abundance, from out of some ivy which covered the walls of an old building at El Golfo, on the western side of Hierro. My Fuerteventuran examples are from the Rio Palmas, and the Teneriffan ones from the precincts of a house at the Agua Mansa.

### 251 *Corticaria angulata*, n. sp.

- C. oblongo-ovata*, rufo-ferruginea, sat longe et grosse cinereo-pubes-cens, capite prothoraceque subopacis, hoc angustulo, ad latetia (oculo armato) crenulato necnon in medio angulato-latiore, rugoso-punctato, postice foveâ transversâ impresso, elytris vix fuscescen-tioribus, subnitidis, leviter punctato-striatis, interstitiis uniseriatis

\* Gyllenhal's observation 'Habitat ad horreorum parietes' would seem to imply that the insect has much the same mode of life in Sweden as it has at the Canaries.

punctulatis, antennis breviusculis pedibusque testaceis — Long corp lin  $\frac{2}{3}$ —vix  $\frac{3}{4}$

*Habitat* Lanzaiotam, Fuerteventuram et Canariam, hinc inde haud infrequens

In its pale-fuscous (or testaceo-fuscous) hue, rather long and coarse pubescence, pallid limbs, and very peculiar prothorax (which, although narrow on the whole, is widened and *angular* on either side in the middle, minutely crenulated at the edges, and strongly impressed with a transverse fovea behind), the present *Corticaria* is abundantly characterized. Whether it be identical with any of the numerous ones in Manneheim's Monograph I will not undertake to say, but it is certainly very nearly related to a Russian species in my collection bearing the name of *angulosa*, Motschulsky, and which was given me by the latter some years ago. Indeed, in its singularly shaped prothorax and general hue it is almost coincident with it, and possibly it may be but a local state of the same insect. Nevertheless, since I am not aware that M. Motschulsky has ever *published* his *C. angulosa*, and since the only example of that species from which I am compelled to form an opinion does not quite agree with the Canarian one, I have thought it safer to treat the latter as new, and have therefore characterized it under the (almost similar) title of *angulata*. Judging from the single specimen of Motschulsky's *angulosa* now before me, the *C. angulata* differs principally in its somewhat more oblong (or less rounded) outline, in its rather more developed prothorax (which is a little more prominent, or angular, in the middle, and has its sides, when viewed beneath the microscope, more evidently crenulated), in its longer and less decumbent pubescence, in its totally unkeeled forehead, and in its paler antennæ.

Hitherto I have observed the *C. angulata* only in the three eastern islands of the archipelago—Lanzarote, Fuerteventura, and Grand Canary. In the first of these it is apparently scarce, but in the second I took it commonly at Agua Bueyes and in the Rio Palmas, whilst in the third I beat it, in considerable abundance, from out of an old bush of a yellow *Ononis* at Mogan, towards the south-western portion of the island.

## 252 *Corticaria curta*

*Corticaria curta*, Woll, *Ins. Mad.* 187 (1854)

— — —, *Id.*, *Cat. Mad. Col.* 65 (1857)

*Habitat* in Lanzarota, Fuerteventura, Canaria, Tenerife, Gomeia et Palma, late diffusa

The present *Corticaria*, which abounds in the Madeiran Group, is

doubtless universal at the Canaries, though I did not happen to meet with it in Hierro, for there can be but little question that it must exist in that island also. It is found at nearly every elevation, and in spots both sylvan and exposed. In Lanzarote and Fuerteventura it would seem to be somewhat scarce, but throughout the region of El Monte in Grand Canary it is commoner, in Teneriffe I have taken it around S<sup>ta</sup> Cruz, at Souzal, the Agua Garcia, the Agua Mansa, and Ycod el Alto, and in Palma I observed it, but sparingly. In Gomera it was found, rather abundantly, by Dr Crotch. In size it is intermediate between the last species and the following one, and it may easily be recognized by its somewhat broad, compact, and ovate outline, rather wide and laterally-rounded prothorax (which has the punctures comparatively remote, distinct, and well defined, a shallow, more or less rounded fovea in the centre of its base, and its extreme hinder angles minutely prominent), by its *reddish*-brown hue (particularly of the head and prothorax), and by its palld limbs, —even the antennal club not being infuscated.

### 253 *Corticaria tenella*, n. sp.

*C. ovata*, nigro-picea, minutissime et parce cinereo-pubescent, capite prothoraceque subopacis, h<sup>oc</sup> angusto ad latera subintegro necnon æqualiter et leviter rotundato, dense rugoso-punctato, postice fovea transversa subarcuatâ impresso, elytris vix nigrescentioribus, subnitidis, convexis, leviter punctato-striatis, interstitiis uniseriatim punctulatis, antennis pedibusque rufo-testaceis, illarum clavâ obscuriore.

*Vai* β Capite prothoraceque paulo rufescentioribus [*Insulæ* Gomera et Hierro]—Long corp. lin  $\frac{1}{2}$ —vix  $\frac{2}{3}$ .

*Habitat* in Canaria, Teneriffa, Palma, Gomera et Hierro, passim.

In its minute size, convex, ovate body, and narrow, posteriorly-impressed prothorax, the present insignificant little *Corticaria* is closely allied to the common European *C. gibbosa*. It is however, on the average, still smaller than that species, and of a blacker (or less fuscous) hue, its prothorax is not quite so narrow, a trifle rounder at the sides, more closely, roughly, and less definitely punctured, and with the hinder impression shallower, its head and prothorax are often (at any rate in the *vai* β, from Gomera and Hierro) of a rather more piceous, or even subrufescent, hue, and its antennæ are a little less abbreviated. I have taken it sparingly, and in various positions, in Grand Canary, Teneriffe, Palma, and Hierro, and it was found, rather plentifully, by Dr Crotch in Gomera, but it has not yet been detected in the two eastern islands of the Group.

Genus 107 **LATRIDIUS.**Heibst, *Natur syst* v 8 (1793)254. **Latridius minutus**Tenebrio minutus, *Linn*, *Syst Nat* n 675 (1767)Latridius minutus, *Mann*, in *Ger m Zeitsch* v 96 (1844).— —, *Woll*, *Ins Mad* 190 (1854)— —, *Id*, *Cat Mad Col* 65 (1857)*Habitat* in Canaria, Teneriffa, Gomera, Palma et Hierro, passim

The Canarian specimens of this common European *Latridius* (which has an exceedingly wide geographical range) have their elytra perhaps a trifle more deeply punctate-striated (causing the interstices to appear rather more convex) than is the case in the ordinary ones and in those from Madeira, and their humeral *callus* is more evidently rufescent, but I can detect nothing about them to warrant the suspicion that they are specifically distinct. It is not a very abundant insect in these islands, but widely distributed over them. I have taken it in the region of El Monte in Grand Canary, at the Agua Garcia, the Agua Mansa, and Ycod el Alto, of Teneriffe, in the Barranco da Agua of Palma, and in Hierro. And it was captured, in considerable numbers, by Dr Crotch in Gomera. I have but little doubt that it has been naturalized from more northern latitudes.

255 **Latridius opacipennis**, n sp

*L. oblongo-ovatus*, rufo-ferrugineus, opacus, capite prothoraceque profunde rugoso-punctatus, in medio canaliculatus, hoc latiusculo, transverso, angulis anticis obtuse rotundato-amphatis, postice paulo angustiore, ad latera minute crenulato, elytris subdepressis, leviter substriato-punctatis, interstitis latis planis, antennis brevibus, testaceis, clavâ minus abruptâ — Long corp lin  $\frac{3}{4}$

*Habitat* Teneriffam sylvaticam, ad Agua Garcia semel tantum repertus

Amongst many examples of the *L. minutus* taken at the Agua Garcia, in Teneriffe, I find a single one which differs to a very remarkable extent (in some measure indeed even structurally) from the remainder, and from this the above diagnosis has been compiled. It differs from that species in its bright rufo-ferruginous hue, *opaque* and less convex surface, in its very much broader prothorax (which has the anterior angles largely and obtusely rounded, and its edges minutely crenulated), in its very lightly sculptured elytra (the striæ of which are scarcely at all impressed, and the interstices wide and flattened), and in the less abrupt club of its rather shorter antennæ

256 *Latridius ruficollis*

*Corticaria ruficollis*, *Mshn, Ent Brit* 1 111 (1802)

*Latridius ruficollis*, *Steph, Ill Brit Ent* iii 114 (1830)

*Lathridius liliputanus*, *Mann, in Germ Zeitsch* v 85 (1844)

— *ruficollis*, *Woll, Cat Mad Col* 66 (1857)

*Habitat* Lanzaotam borealem, prope oppidum Hania semel lectus

The only Canarian example of this European *Latridius* which I have yet seen was taken by myself, from beneath the refuse at the base of a corn-stack, at Hania, in the north of Lanzaote. It occurs in similar positions at Madeira

## Fam. 20. MYCETOPHAGIDÆ.

## Genus 108 MYRMECOXENUS

*Cheviolat, in Silb Rev* iii 267 [script *Myrmecoxenus*] (1835)

257 *Myrmecoxenus sordidus*, n sp

*M* rufo-ferrugineus, subnitidus, parce cinereo-pubescent, capite prothoraceque dense et sat fortiter punctatus, hoc rotundato-quadrato postice vix attenuato, elytris paulo obscurioribus, vix minus dense punctatis, antennis pedibusque rufo-testaceis — Long corp lin vix 1

*Habitat* Fuenteventuram, sub stercore camelino ad Rio Palmas detectus

Although unwilling, in a small and rather obscure genus, to establish a species on the evidence afforded by merely two examples, I am nevertheless compelled to do so in this instance, since I cannot refer the present *Myrmecoxenus* (though partaking, in a measure, of the characters of them *all*) to any of the three European exponents of it which have been hitherto recognized. Thus, from the *M. vaporariorum* it differs, *inter alia*, in its smaller size, darker hue, and more deeply punctured and less densely pubescent surface, from the *subterraneus* it may be known by being a trifle larger and broader, with its prothorax less straightened (and less narrowed) behind, and (together with the head) of a paler hue, and by its surface being rather more pubescent, whilst from the *pinus* its much paler colour and longer and coarser pile, combined with its more thickly and less strongly punctured surface, and its duller, somewhat flatter, and less cylindric body, will equally remove it. The *M. epulo*, Maklin, I have not been able to procure for comparison, so that I am unable to say to what extent the Canarian one may tally with that insect. The only two specimens of it which I have seen hitherto were cap-

tured by myself, from beneath camels' dung, in the Rio Palmas of Fuerteventura, at the beginning of April 1859

### Genus 109 SYMBIOTES

Redtenbacher, *Fna Austri* 198 (1849)

#### 258 *Symbiotes pygmæus*

*Symbiotes pygmæus*, Hampe, in *Ent Zeit Stett* 353 (1850)

*Microchondrus domuum*, Woll, *Ins Mad* tab iv f 2 (1854)

———, *Id*, *Cat Mad Col* 71 (1857)

*Symbiotes pygmæus*, J Duval, *Gen des Col d'Eur* ii 221 pl 54 f 270 (1859)

*Habitat* Palmam, à Dom Gray mense Februario a d 1858 repetitus

The small beetle which I described in 1854 under the name of *Microchondrus domuum* appears (as indeed I have elsewhere stated) to be identical with the European *Symbiotes pygmæus*. At least I can detect no sufficient difference to warrant its separation from that species, though, at the same time, the only two authentic specimens which I have yet seen of the latter (and which have been communicated by Dr Hampe of Vienna) are certainly somewhat larger than those from the Atlantic islands. It seems to be very rare at the Canaries (even more so than it is in Madeira), where indeed I have not myself hitherto met with it. Two examples, however (one of which he has presented to the National Collection), were captured by Mr Gray, during February 1858, in Palma.

### Genus 110 TYPHÆA.

(Kirby) Steph, *Ill Brit Ent* iii 70 (1830)

#### 259 *Typhæa fumata*.

*Dermestes fumatus*, Linn, *Syst Nat* ii 564 (1767)

*Mycetophagus fumatus*, Gyll, *Ins Suec* iii 399 (1813)

*Typhæa fumata*, Woll, *Ins Mad* 199 (1854)

———, *Id*, *Cat Mad Col* 71 (1857)

*Habitat* in Lanzarota, Fuerteventura, Teneriffa et Gomeia, sub quisquilis, rarior

Of the common European *T fumata* (which occurs also, though not very abundantly, in Madeira) I have seen hitherto but sixteen Canarian examples. Eleven of them were taken by myself, from beneath vegetable refuse, in Lanzarote, Fuerteventura, and Teneriffe, and the remaining five by Dr Clotch in Teneriffe and Gomera. My Lanzarotan specimens were captured near Haria, those from Fuerteventura, in the Rio Palmas, and those from Teneriffe, at Taganana, the Agua Mansa, and close to the Puerto of Orotava.

Genus 111 **LITARGUS.**Erichson, *Nat der Ins Deutsch* iii 415 (1848)260 **Litargus trifasciatus**, n sp

*L. ellipticus*, dense pubescens, rufo-ferrugineus, elytris nigris, læte rufo-testaceo-fasciatis, oculis conicis, postice ciliatis, prothorace ad latera vix pallidiore, coleopteris nigrescentibus in limbo dilutioribus necnon in fascus tribus [unâ sc basali valde obliqua, secundâ postmediâ sub-obluniforâ, et tertiâ parvâ apicali, omnibus plus minus fractis] rufo-testaceis ornatis, antennis pedibusque pallide testaceis, illis versus apicem obscurioribus — Long corp lin 1-1½

*Habitat* Gomera, prope "Hermigua" à Dom Crotch repertus

This most interesting *Litargus* was detected near Hermigua, in Gomera, by Dr Crotch, during the spring of 1862. It is of precisely the same type as the two Madeiran representatives of the group—the *L. pictus* and *pilosus*, though, in its small bulk, general structure, very conical eyes\*, and unstriated elytra, it is perhaps, specifically, nearer to the latter than to the former. It may, however, be known from them both by its paler (or more rufescent) head and prothorax, and by its elytra being ornamented with *three*, usually well-defined (but occasionally broken up, or disjointed) reddish-yellow fasciæ—the first of which is basal and very oblique (running from either shoulder to nearly the middle of the suture) the second postmedial and somewhat obluniforâ (being less oblique than the preceding one, and drawn in an opposite direction), and the third small and sub-apical (being represented by two mere patches, or spots). It is more elliptical and depressed than the European *L. bifasciatus*, its head and prothorax (the latter of which is narrower posteriorly) are more rufescent, and its elytra have their markings more abbreviated laterally, and the two apical spots so largely developed as to form an additional (or third) fascia.

Fam. 21. **DERMESTIDÆ.**Genus 112 **DERMESTES**Linnaeus, *Syst Nat* ii 561 (1767)

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\* In the diagnosis given in my *Ins Mad'* I overlooked the anomalous fact that the eyes of the *Litargi* are furnished behind with a few long, posteriorly-directed setæ. This peculiarity is correctly figured in the 347th plate of Sturm's 'Deutschlands Fauna', yet I cannot see that it is noticed in any of the diagnoses to which I have had access. It exists however, in all the species which I have examined,—namely, in the European *bifasciatus*, the Madeiran *pilosus* and (comparatively gigantic) *pictus* and the Canarian *trifasciatus*.

261 *Dermestes vulpinus*

- Dermestes vulpinus*, *Fab*, *Spec Ins* 1 64 (1781)  
 ———, *Brulle*, in *Webb et Berth (Col)* 59 (1838)  
 ———, *Sturm*, *Deutsch Ent*, xix 42 tab 350 f A (1847)  
 ———, *Woll*, *Ins Mad* 202 (1854)  
 ———, *Id*, *Cat Mad Col* 72 (1857)

*Habitat* Lanzarotam, Teneriffam et Gomeram, in cadaveribus pellibusque sat vulgaris

The almost cosmopolitan *D vulpinus* (well characterized by the exceedingly minute spine with which the extreme apex of each of its elytra is furnished) is occasionally pretty abundant, in certain spots, at the Canaries. Hitherto, however, I have myself observed it only in Lanzarote and Teneriffe,—namely, near Arecife of the former (where it was taken also by Mr Gray), and near S<sup>ta</sup> Cruz of the latter (where it was found likewise by the Barão do Castello de Paiva). But it was captured in Gomera by Dr Crotch. It occurs in Madeira

262 *Dermestes Frischii*

- Dermestes Frischii*, *Kugel*, in *Schneid Mag* 478 (1794)  
 ———, *Sturm*, *Deutsch Ent*, xix 44 tab 350 f D (1847)  
 ———, *Erich*, *Nat der Ins Deutsch* iii 428 (1848)

*Habitat* Lanzarotam, Canariam et Teneriffam, in usdem locis ac præcedens

The present *Dermestes* is almost identical *primâ facie* with the *vulpinus*, nevertheless the apices of its elytra are destitute of the minute spinules which characterize that insect, its pubescence is blacker (with the paler portions, however, at the sides of the head and prothorax and on the scutellum, usually of a clearer white), and the ultimate segment of its abdomen beneath has merely a small, terminal, sublunate dark patch—instead of a band extending along its entire length. It is about equally common in these islands with the preceding species, with which it is generally found in company. It was taken by Mr Gray and myself, from out of dead animals, near Arecife, of Lanzarote, and subsequently, by myself, in the sandy region of Grand Canary between Las Palmas and the Isleta, as also close to S<sup>ta</sup> Cruz in Teneriffe.

Genus 113 *ATTAGENUS*

Latreille, *Gen Crust et Ins* ii 32 (1802)

263 *Attagenus pello*

- Dermestes pello*, *Linna*, *Fnu Suec* 141 (1761)  
 ———, *Fab*, *Syst Eleu* i 313 (1801)

*Attagenus pelio*, *Steph., Ill. Brit. Ent.* iii 126 (1830)

*Megatoma pelio*, *Brullé, in Webb et Berth. (Col.)* 59 (1838)

*Habitat* ? [testibus DD Webb et Berth., in ins. Canariensibus] mihi non obviis

I have not myself detected this almost cosmopolitan insect at the Canaries, nevertheless, since it is recorded by Messrs Webb and Berthelot, and since the species is so well marked that it could scarcely be mistaken for anything else, I have ventured to admit it into the present Catalogue. I am totally unable, however, to state in which island it was found,—the miserably poor and loosely-strung list of Canarian Coleoptera included in that work not having so much as a single locality entered for any one of them ! It is fortunate therefore that the *A. pelio* is quite unimportant, since, wherever taken, it was clearly a mere accidental introduction from more northern latitudes.

#### 264 *Attagenus Schæfferi*

*Megatoma Schæfferi*, *Hbst., Kaf.* iv 93 (1791)

— *macellarium* ?, *Brulle, in Webb et Berth. (Col.)* 59 (1838)

*Attagenus Schæfferi*, *Erich., Nat. der Ins. Deutsch.* iii 440 (1848)

*Habitat* Teneriffam, in domibus Sanctæ Crucis captus, nisi fallor, introductus

I believe that the few Canarian examples which I have yet seen of the present *Attagenus* are rightly referred to the *A. Schæfferi*, rather than to the *A. megatoma*, nevertheless they do not precisely accord with Erichson's diagnosis of that species. I have taken the insect sparingly in houses at St Cruz, of Teneriffe,—where, however, it has evidently been naturalized through the medium of commerce. When immature the specimens are more or less piceous, or even ferruginous. It occurs, in similar situations, at Madeira.

#### Genus 114 **TELOPES.**

Redtenbacher, *in Russeg. Reise*, i 984 (1843)

Although agreeing with *Attagenus* proper in the exceedingly elongate, ensiform last joint of the male antennal club of at any rate one of its species, I have nevertheless retained the present genus as distinct (even though it has been re-merged into the former by Erichson), because it seems to me to possess sufficient peculiarities to render its separation therefrom desirable. Without entering into minor details, *Telopes* may be known from *Attagenus* by the relatively shorter, obtuser, and convexer bodies of the insects which compose it,—the surfaces of which are densely pubescent (and are likewise studded, in addition to the decumbent under-pile, though sometimes very sparingly so with long and suberect hairs towards either side),

whilst then maxillæ and palpi are longer, and their legs are more robust,—the tibiæ being especially broader, much more coarsely spinulose along their outer edge, and with the terminal spurs considerably larger and stronger (that of the anterior pair being greatly developed, thickened, outwardly directed, and flexuose) It would appear to be peculiar, principally, to Mediterranean latitudes, and the species which constitute it, although variable in hue, are more or less evidently adorned with transverse (though often obscure and interrupted) fasciæ They are less strictly *Deimestideous* in their modes of life than the true *Attagenæ*,—occurring for the most part (like *Anthenus*) on flowers in the open country, and only occasionally exhibiting the skin-infesting habits which (as in the case of the normal members of the family) characterize the latter

Although, as has already been intimated, one of the insects described below has the last joint of its male-clava enormously elongated as in the true *Attagenæ*, I nevertheless consider this fact of but slight importance, seeing that the antennæ of nearly *all* these immediate *Deimestideous* forms have then club so peculiarly modified that it is hardly possible to regard even the *structural* features of that organ as of more than specific signification, for it is scarcely too much to assert that we actually find them (within certain fixed limits) differently proportioned in almost every individual species Hence the discrepancies (both specific and sexual) in the antennæ of the three insects here characterized (*each* of which possesses its own exact modification) offer no obstacle to their being generically associated, and I have but little doubt (when their many points of *agreement*, above alluded to, are duly considered) that they are strictly members of a single and perfectly natural assemblage The two comprised under my latter Section have their tibiæ still more robust (and broader) than the representative of the former one, but this is merely a difference in degree, and not in kind nevertheless the female *tarsal* peculiarity of the *T. obtusus* (which has the second joint of its four posterior feet less elongated than is the case in those of its males, and in those of *both series* of the other two species) is certainly much more remarkable

§ I *Coipus versus latera pilis longissimis erectis sat dense obsitum tibiæ sublineares tarsi in sexu femineo minus elongati, posteriores articulo 2<sup>do</sup> quam tertius paulo (in sexu femineo) longiore antennarum articulus ultimus in maribus longissimus*

#### 265 *Telopes obtusus.*

*T.* ovalis, niger vel fusco-niger, fulvo-cinereo-pubescent, prothorace

utrinque et basi elytrisque in fasciis tribus necnon ad apicem densius pallido-pilosis, antennis nigris, ad basin picescentibus, pedibus piceis, tarsis pallidioribus

*Variat* fasciis plus minus obsoletis vel etiam confluentibus, pube plus minus albedo-cinerea

*Mas* antennarum articulo ultimo longissimo ensiformi

*Fcem* antennarum articulis 9<sup>no</sup>, 10<sup>mo</sup> et 11<sup>mo</sup> inter se subæqualibus (ultimo vix majore) — Long corp lin 1—vix 2

*Dermestes obtusus*, Gyll, in *Schon Syn Ins* 11 88 (1808)

*Attagenus obtusus*, Lucas, *Col d'Algérie*, 239 (1849)

— abbreviatus, *Hartung, Geolog Verhältn Lanz und Fuert* 140 & 141

*Habitat* Lanzarotam, Fuerteventuram et Canariam, in floribus tempore vernali, passim

The excessive variability of this insect, in conjunction with the very different aspect of the sexes, might well lead to the establishment of two or three supposed species out of it, were but a few examples present (and those perhaps divergent ones *inter se*) to form an opinion from. Nevertheless, after a close examination of a very extensive series obtained in both Lanzarote and Fuerteventura, I am bound to confess (despite the opposite appearance of the highly coloured individuals and those in which the markings are obsolete) that I cannot detect any character sufficient to warrant its separation from the Mediterranean *T obtusus*—an insect which occurs in Portugal and in the north of Africa. It is tolerably common, on flowers, in Lanzarote and Fuerteventura, during the spring, and I have also taken it, though sparingly, in the low sandy district between Las Palmas and the Isleta, of Grand Canary, as well as in the little island of Graciosa (off the extreme north of Lanzarote). Although principally, however (when in the imago-state), of flower-infesting habits, it is not entirely so, for, like the *Anthem* and other allied Dermestideous forms, it will occasionally attack the skins and dried remains of animals also, and in such positions I have observed it on the sea-beach near Arrecife, of Lanzarote.

I possess Fuerteventuran specimens, communicated by Dr Heer, and which were collected in that island by M Hartung, so that I am enabled to assert positively that it is the *Attagenus abbreviatus* described in the volume (above cited) of the latter. Nevertheless without this corroboration such would have been sufficiently evident, since it is apparently the *only Attagenus* (or *Telopes*, as I have regarded it) which is common to the two eastern islands of the archipelago,—in *both* of which M Hartung records the *A abbreviatus*.

Brightly coloured examples of it approach very closely *at first sight*

to the *T. multifasciatus* from Grand Canary, nevertheless, apart from its *structural* peculiarities—of slenderer tibiæ, the immensely developed last joint of its male-clava, and the shorter feet of its female sex (which have their second joint less conspicuously elongated),—it may be further known by its rather larger size, by the long and suberect additional hairs with which it is studded towards either side being much more numerous, and by the dark portions of its surface being usually browner, whilst the fasciæ are generally of a duller and obscurer white

§ II *Corpus antice ad latera pilis longiusculis suberectis vix vestitum tibiæ dilatate tarsi posteriores (in utroque sexu) elongati, articulo 2<sup>do</sup> (in utroque sexu) quam tertius multo longiore antennarum articulus ultimus vel in utroque sexu parvus, vel in maribus paulo elongatus*

#### 266 *Telopes anthrenoides*, n sp

*T* ovalis, fusco-niger, cinereo-pubescent, prothorace utrinque elytrisque in fasciis tribus obscuris necnon ad apicem densius pallido-pilosus, antennis nigris, ad basin picescentibus, articulo ultimo (in utroque sexu) parvo, pedibus rufo-piceis, tarsis pallidioribus. *Mas* antennarum clavâ paulo longiore, articulis penultimo et antepenultimo leviter elongatis

*Fem* antennarum clavâ paulo brevior, articulis penultimo et antepenultimo quam terminalis vix (singulatim) majoribus — Long corp lin vix  $1\frac{1}{4}$

*Habitat* Canariam australem, in arenosis aridis ad Maspalomas captus

It is just possible that this insect may be only a depauperated state of the *T. multifasciatus* peculiar to the dry sandy region of Maspalomas, in the extreme south of Grand Canary (where my few specimens were captured), nevertheless I can hardly believe that such is really the case. It differs in being smaller than that insect, in its pubescence (as well as even the few elongate additional hairs with which it is studded on either side anteriorly) being altogether whiter or more cinereous and still more decumbent, in its elytral fasciæ being less distinct, and in its tibiæ being perhaps (if anything) a trifle narrower

#### 267 *Telopes multifasciatus*

*T* ovalis, niger, nigrescenti-pubescent, prothorace utrinque et in maculis duabus posticis elytrisque in fasciis tribus, necnon ad apicem, pallido-pilosus, antennis nigris, ad basin picescentibus, articulo ultimo (in utroque sexu) parvo, pedibus piceis, tarsis vix pallidioribus

*Mas* antennarum clava paulo longiore, articulis penultimo et antepenultimo leviter elongatis

*Fœm* antennarum clavâ paulo brevior, articulis penultimo et antepenultimo quam terminalis vix (singulatim) majoribus —Long corp  
ln  $1\frac{1}{3}$ —vix  $1\frac{2}{3}$

*Telopes multifasciatus*, *Woll*, *Ann Nat Hist* (3rd series) xi 218 (1863)

*Habitat* Canariam Grandem, ad flores varios (sed præsertim *Cistus monspeliensis* L.) tempore vernali hinc inde vulgaris

The present *Telopes* seems to be the universal one of Grand Canary, which is the only island in which I have hitherto observed it. It occurs more particularly at intermediate elevations,—where, during the spring months, I have taken it throughout the region of El Monte, in the district between Tarajana and Maspalomas, &c., in the latter of which it abounds on the blossoms of the *Cistus monspeliensis*. At first sight it very much resembles the following species (from Teneriffe and Palma), but it is, on the average, a trifle larger, with indications (more or less expressed) of *three* elytral fasciæ (instead of only two), and with the terminal joint of its club rather smaller *in both sexes* than either of the two which precede it,—the males moreover, having their penultimate and antepenultimate ones slightly elongated, causing the entire clava to be less shortened than that of the females

### 268 *Telopes fasciatus*

*T* breviter ovalis, niger, nigrescenti-pubescent, prothorace utrinque et in maculis duabus posticis elytrisque in fascis duabus (posticâ subevanescente) necnon mox ante apicem pallido-pilosis, antennis nigris, ad basin picescentibus, pedibus piceis, tarsis vix pallidioribus  
*Mas* antennarum clavâ paulo longiore, articulo ultimo leviter elongato  
*Fœm* antennarum clavâ paulo brevior, articulis tribus inter se subæqualibus —Long corp ln  $1\frac{1}{4}$ —vix  $1\frac{1}{2}$

*Telopes fasciatus*, *Woll*, *Ann Nat Hist* (3rd series) xi 218 (1863)

*Habitat* in floribus Teneriffæ, Gomeræ et Palmæ, tempore vernali frequens

Whilst the last species is the ordinary one of Grand Canary, the *T. fasciatus* is apparently universal throughout the low and intermediate elevations of Teneriffe, Gomera, and Palma. It will probably occur in Hierro likewise, though, as we visited that island too early in the season for the flower-infesting Coleoptera, I did not observe it there. Between the Villa and Puerto of Orotava it abounds during the spring, and it is almost equally common in the Barranco above S<sup>ta</sup> Cruz of Palma. In Gomera it was taken by Dr Crotch, near San Sebastian. It is, on the average, a little smaller and proportionally shorter than the preceding species, and its elytral fasciæ (instead of being three in number) are reduced to only two, and

even of these the hinder one is usually more or less obsolete. Its antennal club, however, constitutes its chief distinctive feature—the three joints being subequal in the females, whilst the *terminal* one is slightly elongated in the males, whereas in its ally the last one is comparatively minute in both sexes, and the penultimate and antepenultimate ones (instead of the terminal) are a little enlarged in the males.

### Genus 115 ANTHRENUS

Geoffroy, *Hist des Ins* 1 113 (1764)

#### 269 *Anthrenus varius*

*Anthrenus verbasci*, *Oliv* [nec *Linn* 1767], *Ent* 11 14 pl 1 f 2 (1790)

— *varius*, *Fab*, *Ent Syst* 1 262 (1792)

*Megatoma verbasci*, *Brullé*, in *Webb et Berth (Col)* 59 (1838)

*Anthrenus varius*, *Erich*, *Nat der Ins Deutsch* 111 455 (1848)

— —, *Woll*, *Ins Mad* 205 (1854)

— —, *Id*, *Cat Mad Col* 73 (1857)

*Habitat* in Lanzarota, Fuerteventura, Canaria et Teneriffa, ad flores, passim

The common European *A varius* (which occurs in Madeira and Porto Santo) is probably universal at the Canaries, though (owing to our visit to those two islands having been too early in the season for the flower-infesting Coleoptera) I did not capture it in either Gomeira or Hierro, nor indeed do I happen to have detected it even in Palma, but in Lanzarote, Fuerteventura, Grand Canary, and Teneriffe it is here and there abundant—both on flowers and about the inner walls of houses. From Teneriffe it has also been communicated by the Barão do Castello de Parva. It may be readily known, *inter alia*, by its 11-jointed antennæ and triarticulate club.

#### 270 *Anthrenus claviger*

*Anthrenus claviger*, *Erich*, *Nat der Ins Deutsch* 111 458 (1848)

*Habitat* in Palma, tempore vernali a d 1858 sat copiose lectus

It is rather singular that, whilst failing to detect the last species in Palma, I should have met with the common European *A claviger* there instead. It is the only island of the seven in which I have hitherto observed this small and very distinct *Anthrenus*.

## Fam. 22. BYRRHIDÆ

### Genus 116 SYNCALYPTA.

(Dillwyn) Steph, *Ill Brit Ent* 111 133 (1830)

271 *Syncalypta integra*, n. sp.

*S.* breviter ovalis, valde convexa, nigra, setis rigidis parce obsita, prothorace punctato, elytris leviter striatis (striis obsolete et valde remote punctatis), antennis pedibusque rufo-ferrugineis, tibis anticis brevibus, latis, extus integris — Long corp. lin.  $1\frac{1}{4}$

*Habitat* in Hienio, in regione sylvaticâ “El Golfo” dictâ semel capta

The present *Syncalypta* is about the size of the Madeiran *S. capitata*, nevertheless it is a little rounder (or more regularly oval) than that insect, its prothorax is less deeply punctured, its elytra are more convex, with their striæ (which, except under the microscope, seem to be quite impunctate) very much finer, its front tibiæ are broader, shorter, and apparently entire along their outer edge, and the terminal joint of its clava is larger. The only example which I have seen was captured by myself, during February 1858, in the sylvan district of El Golfo, on the western slopes of Hienio.

272 *Syncalypta ovuliformis*

*S.* breviter obovata, convexa, nigra, setis rigidis obsita, prothorace profunde punctato, elytris profunde striato-punctatis, antennis pedibusque rufo-ferrugineis, tibis anticis extus parce spinulosis — Long corp. lin. 1

*Syncalypta ovuliformis*, *Woll., Ins. Mad.* 207 (1854)

— —, *Id., Cat. Mad. Col.* 73 (1857)

*Habitat* Teneriffam sylvaticam, ad Agua Garcia semel repetita

Although I have at present no type in my possession for comparison, I believe nevertheless that this *Syncalypta* is identical with the Madeiran *S. ovuliformis*. It may be known from the last species by its rather smaller size and more obovate outline, by its prothorax being more coarsely punctured, by its elytra being less convex and regularly and deeply striate-punctate, and by its fore tibiæ being relatively less dilated, and minutely (though sparingly) spinulose along their outer edge. As in the case of that insect, I have hitherto seen but a single example—which was taken by myself at the Agua Garcia, in Teneriffe.

## Fam. 23. HISTERIDÆ.

Genus 117. *HOLOLEPTA*

Paykull, *Mon. Hist.* 101 (1811)

273 *Hololepta Peiraudieri*

*H.* parallelo-ovalis postice subangustior depressa, atia, nitidissima, fronte lata haud striatâ, mandibulis elongatis porrectis in medio

unidentatus, prothorace lato, ad latera marginato, intia angulos anticos foreâ valde profundâ auriculiformi notato, postice canaliculâ tenui mediâ impresso, elytris ad apicem valde oblique truncatis, sulco subhumerali sinuato utrinque abbreviato strisque 2 dorsali-bus (sc 1<sup>ma</sup> abbreviatâ profundâ, et 2<sup>da</sup> valde abbreviatâ quasi fo-ream punctiformem simulante) impressis, propygidio utrinque punctis perpaucis magnis irrorato, pygidio impunctato, tibus an-ticis 4-, posterioribus 3-dentatis — Long corp ln 6

Hololepta Perraudieri, *de Mairs*, *Ann de la Soc Ent de France*, (3<sup>ème</sup> série) v 397 pl 10 (1857)

*Habitat* Teneriffam (sec cl de Marseul) et Gomeiam, rarissima, in hac a Dom Crotch tempore vernali a d 1862 semel deprehensa

This large and peculiar Histerid altogether escaped my own obser-vation in these islands, and I should have had no other evidence of its existence beyond the assertion of M de Marseul (who has figured it, very accurately, from a specimen stated to have been found in Teneriffe by M Henri de la Perraudière) had not a single example, now before me, been captured by Dr Crotch in Gomera Dr Crotch informs me that he took the individual referred to in a house at San Sebastian, and I have but little doubt, therefore, that it must have crawled from out of one of the dried *Euphorbia*-stems which it is the custom to bring down from the hills for fuel It corresponds precisely with de Marseul's admirable diagnosis, except that it is considerably larger than the type which he appears to have described from

The excessively depressed and highly polished surface of the *H Perraudieri*, in conjunction with its subparallel-oval outline (which, however, is perceptibly wider in front than behind), its elongate por-rect mandibles (which are armed with a small central tooth inter-nally), its large and wide prothorax (which has a deep auriculiform impression immediately within each of its anterior angles, and a thin line, or channel, down its *posterior* disc), and the two very short dorsal stræ (particularly the inner one, which is nearly obsolete, or reduced to a mere fovea) with which its obliquely-truncated elytria are furnished, will suffice, apart from minor characters, to distinguish it

Dr Crotch has presented his specimen to the British Museum col-lection

### Genus 118 TERETRIUS

Erichson, in *Klug Jahrb* 1 201 (1834)

I refer the insect described below to *Teretrius* because in nearly all its structural characters, and every one of its external ones it agrees precisely with the members of that group Nevertheless on care-fully dissecting it I find that there are a few points at all events in

which its generic features do not coincide with those given by de Marseul,—which, however, I ought perhaps to add, do not completely agree with the conclusions that I have arrived at even as regards the ordinary European *T picipes*. Thus, in the Teneriffan species the mentum is semicircular (being regularly *rounded*, instead of emarginated, in front), the second and third joints of the maxillary palpi are subequal (instead of the former being much the longer of the two), and the antennæ have their club exceedingly solid and *un-an-nulated* (which, however, is equally the case in the *T picipes*), the first joint of their funiculus considerably enlarged and subglobose, and the last (or anteclaval) one extremely thin and lamelliform

#### 274 *Teretrus cylindricus*, n sp

*T cylindricus*, niger, nitidus, ubique punctulatus, prothorace amplo, convexo, viz picescentiore, prosterno brevi, simplici (nec bistriato), mesosterno canaliculato, lobo antico magno, pedibus rufo-piceis, tibus anticis extus 6-, posterioribus 5-spinosis — Long corp lin  $1\frac{1}{4}$

*Habitat* Teneriffam sylvaticam, ad Agua Garcia exemplar unicum cepi.

The present *Teretrus* is about the size of (or perhaps a trifle larger than) the European *T picipes*, which at first sight it much resembles. It is, however, a little broader than that insect, its prothorax (which is slightly picescent) is convexer and more developed (it being proportionally somewhat wider in front), its tibiae are more powerfully spinulose (the hinder pair, which are more evidently curved, having *five* spines along their outer edge, instead of only two), its prosternum is rather shorter (being more broadly truncated at the apex) and free from the two longitudinal costæ which exist in that species, and its mesosternum is channeled down the centre, with its anterior lobe larger, or more produced. The proportions of its abdominal segments likewise, are not quite the same as in the *T picipes*. The only example of it which I have hitherto seen was captured crawling on the inner canvas of my tent, whilst encamped at the Agua Garcia, in Teneriffe, during April 1859

#### Genus 119 EUTRIPTUS.

Wollaston, *Trans Ent Soc Lond* (3rd series) 1 157 (1862)

#### 275 *Eutriptus putricola*

*Eutriptus putricola*, Woll, *Trans Ent Soc Lond* (3rd series) 1 159 pl vii f 7 (1862)

*Habitat* in Lanzarota, Fuenteventura, Canaria, Teneriffa, Gomera et Hierro sub cortice Euphorbium laxo putrido hinc inde haud infrequens

This very distinct little insect, so remarkable (*inter alia*) for its 6-jointed funiculus, and the immense outwardly-directed spine into which the inner apical angle of its fore tibiae is merged, as also for its keeled prosternum, which is much produced in front and elongated into a lobe (instead of being *excavated*) behind, whilst the mesosternum is scooped-out at the central point of contact, to receive this hinder prosternal process, has been so fully described in my Paper on the "Euphorbia-infesting Coleoptera of the Canaries" (lately published in the 'Transactions of the Ent Soc of London') that I need not enter here into its many peculiarities. It appears to be confined (so far as observed hitherto) to the rotten *Euphorbia*-stems,—beneath the damp putrid bark of which it resides, in company with the numerous other insects of similar habits. There can be little doubt that it is universal throughout the archipelago, although I did not happen to meet with it in Palma. But in Lanzarote, Fuerteventura, Grand Canary, Teneriffe, and Hierro I have captured it, more or less abundantly, and it was found, during the spring of 1862, by Dr Clotch, near San Sebastian, in Gomera. In Lanzarote it was taken also by Mr Gray, and I detected it even in the little island of Lobos, off the north of Fuerteventura. It has been discovered during the past year in Madeira,—where four examples of it were obtained by Mr Bewicke, from out of the decayed branches of *Euphorbias*, in the east of the island.

### Genus 120 **HISTER**

Linnaeus, *Syst Nat* ii 566 (1767)

#### 276 **Hister major**

*Hister major*, Linn, *Syst Nat* ii 566 (1767)

— —, Brulle, in *Webb et Berth (Col)* 59 (1838)

— —, de Marseul, *Ann de la Soc Ent de France*, (3<sup>ème</sup> série) ii 173 pl 6 f 4 (1854)

— —, Woll, *Ins Mad* 210 (1854)

— —, *Id*, *Cat Mad Col* 74 (1857)

*Habitat* in inferioribus Canariæ et Teneriffæ, minus frequens

The *H major*, which is found throughout southern Europe and northern Africa, and which occurs sparingly in the Madeiran Group, appears to be somewhat scarce in these islands. I have taken it in Grand Canary, and it has been communicated by the Rev R T Lowe from Orotava, and by the Barão do Castello de Paiva from S<sup>a</sup> Cruz, in Teneriffe.

#### 277 **Hister canariensis**, n sp

*H* subquadrato-ovalis, nigri, nitidus, striâ frontali arcuata, pro-

thoracis stria duabus lateralibus subparallelis fere integris (exteriore postice vix abbreviatâ), elytrorum striâ humerali obliquâ, subhumerali nullâ, 1-3<sup>um</sup> dorsalibus integris, 4<sup>ta</sup> obsoletâ (e punctis paucis elongatis versus apicem compositâ), 5<sup>ta</sup> nullâ, suturali sat elongatâ (postice vix, sed antice valde abbreviatâ), stria omnibus fere impunctatis, pygidio subopaco, fortiter punctato, antennis pedibusque nigro-piceis, tibus anticis 3-dentatis, posterioribus biserialium multispinosus — Long corp lin  $2\frac{1}{2}$ -3 $\frac{1}{2}$

*Habitat* in montibus Teneriffæ, rarior

Although unwilling to erect an additional species in a group so extensive as *Hister*, yet, after a careful survey of de Marseul's monograph, I am satisfied that the present one cannot be referred to any of those which he has recorded. Its *position*, however, in his arrangement is easily determined, since it belongs to that comparatively small Section of the genus in which the lateral, or "subhumeral," stria is obsolete and in which (at the same time) the pronotum is furnished with *two* striæ at either side. Judging from his figures and diagnoses, its nearest allies would appear to be the *H. fossoi* from Senegal, and the *obesus* from Guinea and southern Africa but the following combination of characters will serve to distinguish it from the forms which it most closely resembles. Thus, its two prothoracic lines are nearly entire (the outer one only being *very* slightly abbreviated behind), its elytral striæ are deep and simple (though the sutural one is sometimes just perceptibly crenated), the three dorsal ones being complete (for the inner two are merely a trifle shorter *at the base*), the fourth is obsolete (being represented by a few elongate punctures, or a broken-up line, *behind*), the fifth is quite absent, and the sixth (or sutural one) commences at about a third of the distance between the scutellum and the apex, and is continued *almost* to the latter. Its front tibiæ are externally tridentate (the apical tooth being large, obtuse, and surmounted by three spinules, whilst the second and third are gradually smaller and capped, each of them, by a single spinule), and its four posterior ones are densely spinose.

Hitherto the *H. canariensis* has been observed only in Teneriffe, where it would seem to be somewhat scarce. I have taken it at Taganana, and it has been communicated by the Barão do Castello de Paiva from Las Mercedes.

## Genus 121 CARCINOPS

De Marseul, *Ann. de la Soc. Ent. de France*, (3<sup>ième</sup> serie) III 83 (1855)

### 275 Carcinops 14-striatus

Dendrophilus 14-striatus, Steph., *Ill. Brit. Ent.* v 412 (1832)

Paromalus pumilio Erich. in *Klug Jahrb.* 1 169 (1834)

*Paromalus pumilio*, *Woll, Ins Mad* 213 (1854)

*Carcinops pumilio*, *de Marseul, Ann de la Soc Ent de France*, III 91  
pl 22 f 4 (1855)

*Paromalus pumilio*, *Woll, Cat Mad Col* 74 (1857)

*Habitat* Lanzarotam, Fueteventuram, Teneriffam et Gomeram,  
sub quisquilis degens

The little *C* 14-*striatus*, which occurs throughout central and southern Europe, the north of Africa, and Madeira, is pretty widely distributed over these islands—where in all probability it will be found to be universal, if searched for in the proper situations. Nevertheless, hitherto, I have observed it only in Lanzarote, Fueteventura, and Teneriffe, in the last of which, however, as well as in Gomera, it has been captured by Dr Crotch. It is chiefly to be met with beneath decaying vegetable detritus, especially under the putrid leaves of the Prickly Pear (*Opuntia Tuna*), in waste spots where they have been thrown away as refuse.

## Genus 122 SAPRINUS

Emichson, in *Klug Jahrb* 1 172 (1834)

§ I *Elytriorum striâ suturali antice plus minus abbreviatâ*

### 279 *Saprinus nobilis*, n sp

*S* cyaneo-niger, supia subopacus, densissime rugoso-punctatus, prothorace in disco postico elytrisque in spatio communi obcordato pone scutellum necnon per marginem ipsissimum posticum politis, striâ frontali nullâ, elytris singulis striâ suturali tenui antice valde abbreviatâ (a medio usque ad apicem continuatâ) necnon duabus parvis obliquis versus humeros impressis, prosterno punctulato, lineis antice late divaricatis, mesosterno sat dense et profunde punctato, tibus anticis extus leviter et obtuse denticulatis, posterioribus biseriatis spinulosis, tarsis (sed præsertim anticis) piceis—Long corp lin  $2\frac{1}{2}$ – $3\frac{1}{2}$

*Habitat* Teneriffam, rarissimus, prope Sanctam Crucem necnon sub stercore humano in sylvâ ‘Las Mercedes’ dictâ captus

I believe that the present *Saprinus* is undoubtedly distinct from every species described in de Marseul's Monograph, though perhaps it approaches nearer to the *S. figuratus*, from northern Africa, than to any other of them. Apparently, however, it is much larger than that insect, of a dark cyaneous-blue (instead of a brownish black), with its polished prothoracic space single (instead of being shaped-out into three compartments), and with its sutural line (instead of being complete) greatly abbreviated anteriorly. Apart from minor characteristics, its almost evanescent striæ, combined with its cyae-

neous and very densely punctured upper surface (which has only the disc of its pronotum, and an obcordate elytral space behind the scutellum, highly polished and impunctate), will at once separate it from the other Canarian *Saprinus*. The only two specimens which I have yet seen were captured by myself in Teneriffe—one of them near S<sup>ta</sup> Cruz, and the other at a comparatively high elevation in the wood of Las Mercedes

280 *Saprinus osculans*, n. sp.

*S.* subcyaneo-niger, supra convexus, vix subopacus, dense rugoso-punctatus, prothorace in disco late elytrisque in spatio communi obcordato pone scutellum neonon per marginem ipsissimum posticum politis, striâ frontali subobsoletâ, elytris singulis stria suturali antice paulo abbreviata necnon quinque obliquis abbreviatis (internis tenuibus subpunctulatis, et secunda, vel tertiâ dorsali, brevi fere obsoletâ) impressis, prosterno sublævi, lineis antice paulo divaricatis, mesosterno parce punctato, tibus anticis extus denticulatis, posterioribus biseriatis spinulosis, tarsis (sed præsertim anticis) piceis—Long corp. lin  $2\frac{1}{3}$

*Habitat* in Fuerteventura, semel tantum captus

Closely allied to the preceding species, from which, however, it differs in being smaller and less evidently cyaneous, in the sculptured portion of its upper surface being rather less densely punctured, and therefore not quite so opaque (the polished prothoracic space moreover being larger and occupying in its middle the entire length of the pronotum), in its sutural line being less abbreviated in front, in its having at least five oblique striæ (instead of only two) developed at the base of its elytra (the inner ones of which are minutely punctured, but the second nevertheless, or third "dorsal" one, short and subobsolete), in its prosternum being almost impunctate and with the lateral lines less divergent in front, in its mesosternum being less closely and less deeply punctured, and in its anterior tibiæ being more powerfully spined

Judging from de Marseul's diagnosis and figure, the *S. osculans* would perhaps agree better with the *detersus* (from the south of France, Spain, Portugal, Algeria, Senegal, &c.) than with any other species, nevertheless it has no indication of the small additional polished space between the second and third dorsal striæ (at the base of the elytra), or of the less-defined one at the shoulders, which characterize that insect and moreover, in the description of the *S. detersus* no mention is made of the obscure cyaneous tint which is very traceable on the *osculans*. It is hitherto unique, a single example having been captured by myself in Fuerteventura

281 *Saprinus nitidulus*

*S* æneo-niger, nitidus, fronte postice minus punctulatâ, stria subobsoletâ, prothorace ad latera necnon per basin ipsam profunde punctato, intra angulos anticos (rotundatos) distincte impresso, elytris postice profunde punctatis (punctis versus latera inter strias minus ascendentibus), stria profundis, punctatis, suturali antice valde abbreviatâ, humerali in subhumeralem mergente, 1-4<sup>ta</sup>m dorsaliibus pleiunque ultra medium postice continuatis, prosterno obtuse subcarinato, lineis antice divergentibus, mesosterno profunde punctato (per marginem posticum serie punctorum quasi bisectorum terminato), antice sat profunde emarginato angulis obtusis, antennis pedibusque nigro-piceis, capitulo sæpius vix dilutius — Long corp ln 2-3

*Hister nitidulus*, *Fab*, *Syst Eleu* 1 85 (1801)

— —, *Bullé, in Webb et Berth (Col)* 59 (1838)

*Saprinus nitidulus*, *Woll*, *Ins Mad* 215 (1854)

— —, *de Mair*, *Ann de la Soc Ent de France*, 402 pl 17 f 40 (1855)

— —, *Woll*, *Cat Mad Col* 75 (1857)

*Habitat* Lantarotam et Teneriffam, in cadaveribus frequens

I have given the above comparative diagnosis of this common European insect for the sake of calling attention to the exact points in which it differs from the following closely allied species. I have taken it, in tolerable abundance, from out of dead animals, both near Arrecife of Lantarote and around S<sup>ta</sup> Cruz of Teneriffe,—from the latter of which islands it has also been communicated by the Barão do Castello de Paiva

282 *Saprinus subnitidus*

*S* niger, nitidus, fronte densissime punctulata, stria obsoleta, prothorace ad latera necnon per basin ipsam punctato, intra angulos anticos (oblique subtruncatos) leviter impresso, elytris convexis, postice leviter punctulatis (punctulis versus latera inter strias plus minus ascendentibus) stria tenuibus, vix punctulatis, suturali antice paulo abbreviatâ, humerali in subhumeralem mergente, 1-3<sup>ta</sup>m dorsaliibus vix ultra et 3<sup>ta</sup>m 4<sup>ta</sup>mque vix ad medium postice continuatis, prosterno minus carinato, lineis antice leviter divergentibus, mesosterno leviter et vage punctato, antice paulo emarginato angulis sat argute determinatis, antennis pedibusque nigro-piceis, capitulo sæpius ferrugineo

*Var* β [an species?] Elytris paulo distinctius punctulatis, punctulis inter strias utrinque densius ascendentibus [*Ins Palma*]—Long corp ln 2-vix 3

*Saprinus subnitidus*?, *de Mair*, *Ann de la Soc Ent de France*, 404 pl 17 f 41 (1855)

*Habitat* in Lantarota, Fuerteventura et Canaria, unâ cum sp præcedente degen

As may be gathered from the above comparative diagnosis, the present *Saprinus* differs from the *nitidulus* in being blacker (with scarcely any perceptible ænescent tinge), in its forehead being as densely punctured behind as in front, in the punctures and striæ of its upper surface being altogether very much finer (the latter being nearly *simple*, or but delicately crenulated), in the anterior angles of its pronotum being rather more obliquely-truncated at their apex and with the shallow depression within them a trifle less distinct, in its elytra being somewhat rounder and convexer, with the sutural stria a little less abbreviated in front, and the others (particularly the two inner ones) perceptibly shorter, in its prosternum being a little more depressed (or less carinated down the centre) and perhaps somewhat less divergent anteriorly, in its mesosternum being very much less deeply punctured, more lightly emarginate at its apex, and with the angles better defined, and in its antennal club being *usually* paler, or more ferruginous. It is found in company with the *S. nitidulus*, but is very much the scarcer of the two. I have, however, taken it sparingly around Arrecife in Lanzarote, close to the Puerto de Cabras in Fuerteventura, and in the sandy region between Las Palmas and the Isleta in Grand Canary. A single example which I captured in the island of Palma I have regarded as a '*var. β*' of this species. It differs merely in having the punctures of its upper surface a little denser—particularly on the elytra, where they ascend more decidedly on either side, nearly filling the whole space between the striæ. I believe, however, it is nothing more than a slight insular modification of the present insect.

As to the synonymy of this *Saprinus*, I am somewhat in doubt. I have therefore referred it to the *subnitidulus* of de Marseul (with which, judging from the description, in its lightly punctured upper surface and rather flattened prosternum it would seem to agree), in preference to treating it as new, nevertheless, since there are many points in which it certainly does *not* accord with the diagnosis of that insect (such as its blacker, or unmetallic, tint, its humeral stria merging into the subhumeral one, and its prosternal lines being by no means *parallel* anteriorly, though they do not diverge quite so much as those of the *S. nitidulus*), I would propose for it the provisional name of *proaimus*, in the event of its proving hereafter to be distinct from the *subnitidulus*. In some respects it might be assigned to the *S. algericus*, but (judging from de Marseul's diagnosis) that appears to be a much smaller species than the present one, and of a pitchy-brown hue.

§ II *Elytrorum striâ suturali antice integrâ (cum quartâ dorsali coeunte)*

a *Fronte a clypeo haud distincte divisâ*

283 *Saprinus chalcites*.

*S* æneus, nitidus, fronte dense punctulatâ, striâ nullâ, prothorace sat dense punctato, in disco postice lævi, intra angulos anticos (oblique subtruncatos) distincte impresso, elytris punctatis, spatio communi pone scutellum (striâ tertiâ, vel secundâ dorsali, terminato) lævi, necnon versus humeros minus dense punctatis, stris indistincte punctulatis, humerali sæpius indistinctâ, 1-4<sup>am</sup> dorsalibus circa medium postice continuatis, prosterno lineis antice et postice divergentibus, mesosterno sat profunde punctato, angulis obtusis, antennis pedibusque læte rufo-piceis, tibus anticis extus multidenticulatis, intermediis parce, posticis (angustulis) vix spinulosis, calcaribus minutis, tarsis longiusculis, subgracilibus

*Mas metasterno postice in medio leviter bituberculato* — Long corp lin 1-vix 2

*Hister chalcites*, Illig, *Mag für Ins* vi 40 (1807)

— æneus<sup>o</sup>, Brulle [nec Fab], in *Webb et Berth* (Col) 59 (1838)

*Saprinus chalcites*, Woll, *Ins Mad* 216 (1854)

— —, de Mars, *Ann de la Soc Ent de France*, 445 pl 18 f 71 (1855)

— —, Woll, *Cat Mad Col* 75 (1857)

*Habitat* Lanzarotam, Fuerteventuram, Canariam, Teneriffam, Gomeram et Palmam, vel in cadaveribus vel in stercore humano, hinc inde sat vulgaris

The *S chalcites*, which is common throughout Mediterranean latitudes and which is rather abundant in the Madeiran Group, is in all probability *universal* in these islands,—though I do not happen to have met with it in either Gomera or Hierro, in the former of which, however, it was captured by Dr Crotch. But in Lanzarote, Fuerteventura, Grand Canary, Teneniffe, and Palma I have taken it, more or less plentifully, and in the first of these it was found also by Mr Gray. It is exceedingly variable in stature, but it may be readily known from the other species here described by its bright æneous surface and pale rufo-piceous limbs, by its forehead being densely punctulated and with its stria obsolete, by its prothorax having the front angles very obtuse and the rounded depression within them comparatively deep, by the sculptured portion of its elytra being not very closely punctured, and the polished part (which is not always very rigidly bounded) terminated laterally by the third oblique stria (or second “dorsal” one), by the teeth of its anterior tibiæ being rather small and numerous whilst its intermediate pair are but sparingly spinulose, and the hinder ones (which are comparatively

narrow) still less so, by its tarsi being somewhat long and slender, by its prosternal lines divaricating equally at the base and in front, and by the metasternum of its male sex being furnished with two small tubercles in the centre (between the posterior coxæ) behind

#### 284 *Saprinus fortunatus*, n sp

*S* virescenti-subæneo-niger, nitidus, fronte densissime punctulatâ, striâ nullâ, prothorace ad latera necnon per basin ipsam dense punctato, intra angulos anticos (oblique subtruncatos) vix impresso, elytris densissime punctulatis, spatio communi pone scutellum (striâ recurvâ, vel quatâ dorsali, terminato) politissimo necnon ad humeros minus punctulatis, stris sat tenuibus, vix punctulatis, humerali in subhumeralem meigente, 1-4<sup>ta</sup>m dorsalibus versus medium postice continuatis prosterino lineis antice subapproximatis parallelis, ad basin divergentibus, mesosterno sat profunde punctato, angulis sat acute determinatis, antennis pedibusque piceis, tibis anticis circa 7- (fortiter 4-) dentatis, intermediis parce posticis (angustis, subcuvatis) vix spinulosis, calcaribus parvis, tasis longiusculis, gracilibus—Long corp hn 1½-2

Hister virescens, *Brulle* [nec *Payk* ], in *Webb et Berth* (Col) 59 (1838)

*Habitat* Lanzarotam, Fuerteventuram et Canariam, in stercore bovino, equino, camelino præcipue degens in Lanzarota plerumque abundat

The present well-marked *Saprinus* appears to be intermediate in structure between two distinct specific types, namely that of the *S virescens* and *rugifrons*,—agreeing with the former in its somewhat narrow and comparatively unspinulose hinder tibiæ, minute spurs, slender feet, and simple, densely punctulated forehead, but with the latter in its anteriorly parallel and subapproximated prosternal lines, and in its rather powerfully dentate fore tibiæ. In its greenish hue (which, however, is very much duller than that of the *S virescens*, and is also slightly subænescent) it is more suggestive, *primâ facie*, of the first of those insects than of the second, nevertheless I am inclined to think that it has, in reality, almost as great an affinity with the species around the *metallicus* and *rugifrons* as it has with those around the *chalcites* and *virescens*\*

The *S fortunatus* is rather a common insect in Lanzarote and

\* *Apart* from the characters above alluded to (which, being structural, are necessarily all-important), the most superficial inspection, one would imagine, must have sufficed to distinguish the present *Saprinus* from the European *virescens*—which has its colour immensely brighter, its punctuation very much less dense (though, at the same time, continued lightly even over the disc of the pronotum), its forehead more convex its outline considerably rounder, &c., but scarcely a "superficial" examination seems to have been bestowed on the few Coleoptera which constitute the very meagre list included in MM Webb and

Fuerteventura, where it occurs (principally in dung) during the spring months, and I have likewise taken it, though sparingly, in the region of El Monte, in Grand Canary. In Lanzarote it was found also by Mr Gray.

285 *Saprinus ignobilis*, n. sp.

*S* niger, nitidus, fronte vix marginatâ, minute punctulatâ, prothorace subæqualiter punctato, intra angulos anticos (valde obtusos) haud impresso, elytris sat profunde (pone scutellum vix levius) punctatis, strus profundis sat distincte crenulatis, humerali indistinctâ a subhumerali disjunctâ, 1-4<sup>ta</sup>m dorsalibus versus medium postice continuatis (1<sup>ma</sup> interdum longiore), suturali postice obsoletâ, parte basali recurvâ minute irregulariter undulatâ, prosterno horizontali, obelisciformi (i. e. strus a basi usque versus apicem subparallelis vel potius paulo subapproximatis, et dein subito oblique approximatis, ad apicem ipsum confluentibus), meso- et metasternis depressis, sat dense et profunde punctatis, illo antice minus emarginato sed angulis parum acute determinatis, antennis brevibus pedibusque piceis, tibus anticis circa 6-angulato-dentatis, intermedus parce, posticis vix spinulosis, calcaribus parvis, anticis paulo majoribus subcurvatis.—Long corp. lin 1½.

*Habitat* Lanzarotam, prope oppidum Arrecife à Dom Gray reperiit.

In their small size and dark hue, as well as in the fact of their upper surfaces being minutely punctulated *throughout*, the present *Saprinus* and the following one have much in common. The *S. ignobilis*, however, is a little larger and blacker than its ally, its punctures are deeper, and carried *more evidently* over the entire surface, its forehead is less distinctly margined, more rounded-off at the anterior angles, and without any appearance of being separated from the epistome by a transverse line. its elytral striæ are coarser, slightly longer, and not quite so oblique (the sutural one moreover, being evanescent, except at its extreme base, and with the *recurved portion* which connects it with the ordinary "dorsal" one minutely and irregularly undulated), its prosternum is flatter, or more horizontal, and very peculiarly formed,—the striæ being *subparallel*, or only very slightly approximating, from the base to about two-thirds of the distance to the apex, at which point they suddenly converge obliquely (causing the space between them to be, what I can only express intelligibly by calling of an *obelisk*-shape), its meso- and meta-sterna are more depressed, and very much more deeply and closely punctured (the former being also less excavated at the apex, but with its

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Berthelot's ponderous work, and therefore it is not surprising that we should find this insect (though the mere fact of its possessing a slightly greenish tinge!) referred to the *H. vivens*.

angles nevertheless more rigidly defined), its four hinder tibiæ have their spines shorter, and *less concentrated* towards the outer extremity, and the front pair have their terminal spurs (instead of being obsolete) well defined, and (although not large) subflexuose

Hitherto I have seen but three specimens of the *S. ignobilis*. They were all taken by Mr Gray near Aliecafe, in Lanzarote,—by whom one of them has been presented to the British Museum collection

b *Fronte a clypeo lineâ (vel carinâ) transversâ plus minus distinctâ divisâ*

### 286 *Saprinus minyops*, n. sp.

*S. niger* (vix obsoletissime subænescens), nitidus, fronte semicirculari, grosse marginatâ, carinâ transversâ rectâ sed utrinque minute sinuatâ, angulis ipsis prominulis subacutis (oculos parvos occultantibus), minutissime punctulatâ, prothorace leviter (præsertim in disco) punctulato, intra angulos anticos (obtusos) haud impresso, elytris minute et paice punctulatis, antice paulatim lævioribus (sed etiam ibidem, oculo fortiter armato, minutissime punctulatis), strus minute crenulatis, humerali a subhumerali disjunctâ, 1-3<sup>iam</sup> dorsalibus fere ad medium postice continuatis, 4<sup>tâ</sup> plus minus interruptâ brevioribus, prosterno subsinuato, lineis subapproximatis, antice fere parallelis, ad apicem vix sed ad basin paulo divergentibus, meso- et meta-sternis subconvexis, paice (præcipue hinc) et leviter punctatis, illo angulis anticis obtusis, antennis brevibus pedibusque piceis, tibus anticis circa 6-dentatis, posterioribus versus apicem longe spinuloso-ciliatis, calcaribus parvis, anticis obsoletis — Long corp. lin.  $\frac{3}{4}$ —1 $\frac{1}{4}$

*Habitat* Lanzarotam, Fuerteventura et Canariam, in cadaveribus necnon etiam in stercore humano, in arenosis degens

This very minute *Saprinus* is still smaller and of a less intense black than the last species (though its subænescence is often hardly traceable), and, apart from its diminutive bulk, it may be readily known by its distinctly margined, semicircular forehead, which has the transverse line which separates it from the epistome rather strongly defined, and its anterior angles sharp and prominent, so as almost to conceal from view the (rather small, reniform) eyes beneath them. This prominence of the frontal angles causes the transverse frontal keel which at first sight appears quite straight, to be minutely sinuated towards either end. Its punctures are considerably smaller, and perhaps a little less dense, than those of the *S. ignobilis*, being in fact so small on the disc of its prothorax and (more particularly) on the anterior portion of its elytra as to require a high magnifying power to be perceived. nevertheless (though less conspicuously so than in that insect) they do certainly extend over the *whole* surface

Its elytral striæ are rather shorter, finer, and more oblique than those of the last species, the recurved "dorsal" one is more or less shortened, or interrupted, and the sutural one is continued to the apex, its antennæ are much abbreviated, its four hinder tibiæ (particularly, however, the intermediate pair) are studded with very long spinules, especially towards their extremities, its two front spurs are almost (if not, indeed, entirely) obsolete, and its prosternal lines are nearly parallel, or only *very* obscurely divergent, anteriorly (enclosing an exceedingly narrow space), but slightly divaricate behind.

I have taken the *S. mnyops*, from out of dead animals, &c, in low spots behind the sea-beach, immediately outside Arrecife of Lanzarote, as also, though more sparingly, in Fuerteventura, and in the sandy region between Las Palmas and the Isleta of Grand Canary.

### 287 *Saprinus angulosus*, n. sp.

*S.* piceo-æneus, nitidus, fronte semicirculari, immarginatâ, carina transversâ rectâ, angulis prominulis iectis (oculos fere occultantibus), ubique (sed præsertim antice) minute transversim strigulosâ, prothorace in disco postico levissime sed versus latera et per basin profundius punctato punctis utrinque longitudinaliter confluentibus, intra angulos anticos (vix oblique subtruncatos) haud impresso, elytris postice minute et parce punctulatis, antice lævibus, striis profundis crenulatis, humerali a subhumerali disjunctâ, 1<sup>mâ</sup> 2<sup>dâ</sup>que dorsalibus longe ultra sed 3<sup>tâ</sup> 4<sup>tâ</sup>que vix ultra medium postice continuatis, suturalis parte recurvâ transversâ subrectâ angulos duos (sc. cum suturali et cum quartâ dorsali) efficiente, prosterno lineis subapproximatis, parallelis sed ad basin paulo divergentibus, mesosterno leviter punctato, antennis pedibusque læte rufo-piceis, tibus anticis extus minute multispinulosis, posterioribus præsertim versus apicem longe ciliato-spinulosis, calcaribus parvis, anticis obsoletis.—Long corp. ln 1.

*Habitat* Lanzarotam, in cadaveribus prope oppidum Arrecife captus.

In its prothorax being punctulated throughout (though *very* minutely so on the hinder disc), and in the rather prominent anterior angles of its semicircular forehead, the present *Saprinus* nearly coincides with the *S. mnyops*, nevertheless the resemblance there ceases, for it has no other distinctive feature in common with that insect. It may readily be known by the two characters just mentioned, in conjunction with its æneous (and somewhat pitchy) hue and its brightly rufescent limbs, by almost its entire forehead (which is unmarginated at the sides) being minutely strigulose transversely, by its prothoracic punctures being longitudinally subconfluent towards the edges, by the *recurved portion* of its sutural stria (at the base of the

elytra) being rather straightened—thus forming a tolerably defined angle with each of the stræ which it connects,—by merely the posterior half of its elytra being finely (and somewhat sparingly) punctured, by its front tibiæ being armed externally with a row of short and small spinules (as in the *S. (halcites)*, whilst the four hinder ones are studded (particularly towards their extremities) with long spinose cilia, and by its anterior spurs being apparently almost obsolete

The only four examples which I have seen of this minute *Saprinus* were captured by myself in the low ground immediately outside Arrecife, in Lanzarote

288 *Saprinus mundus*, n. sp.

*S. subvirescenti- vel subænescenti-niger, nitidus, fronte marginata, carinâ transversâ rectâ antice valde irregulariter transversim scabroso-strigosa, prothorace leviter striguloso-punctato, in disco postico lævi, intra angulos anticos (oblique subtruncatos) haud impresso, elytris postice in medio sat profunde et densissime punctatis, stris profundis crenatis, humerali a subhumerali disjunctâ, 1<sup>mâ</sup> 2<sup>dâ</sup>que dorsalibus ultra sed 3<sup>tiâ</sup> 4<sup>tâ</sup>que vix ad medium postice continuatis, prosterno lineis antice subapproximatis parallelis evanescentibus, ad basin paulo divergentibus, mesosterno impunctato, antennis pedibusque piceis, tibus anticis circa 6- (longe 3-) dentatis posterioribus longe ciliato-spinulosis, calcaribus posterioribus elongatis, tarsis paulo incrassatis, subconicis*

*Var. β* [an species?] Læte æneus, elytrorum striis 3<sup>tiâ</sup> 4<sup>tâ</sup>que dorsalibus paulo longioribus, mesosterno subpunctato [*Ins. Canariæ Grandis*]—Long corp. ln  $1\frac{1}{2}$ – $1\frac{1}{2}$

Histei metallicus<sup>2</sup>, *Brulle, in Webb et Berth (Col)* 59 (1838)

*Habitat* Lanzarotam et Fuerteventuram, in cadaveribus et stercore humano *var. β* in Canaria Grandi adhuc solâ collegi

The present *Saprinus* may be known by its greenish-black hue (which has also a just perceptible ænescent tinge), by the very close and rather deep punctures on the hinder half of its elytra, by its frontal keel being straight, and its forehead very irregularly *scabroso-strigulose* anteriorly, by the third and fourth “dorsal” stræ of its elytra being usually much shorter than the first and second, and by its four hinder tibiæ being rather thickly studded with exceedingly long setiform spinules, and with their apical spurs (though somewhat slender) considerably developed. It is nearly allied to the European *S. metallicus*. Its prothorax however, is relatively a little larger than is the case in that insect, its elytra are more densely punctured behind and have their stræ very much shorter—the two inner dorsal ones being exceedingly abbreviated, and the outer (or first) one, which is greatly

elongated in the *metallicus*, reaching scarcely to the middle, and its surface has a more conspicuously *vescent* tinge

The *S mundus* is not uncommon in Lanzarote and Fuerteventura, and in the sandy region of Grand Canary between Las Palmas and the Isleta I captured two specimens which are uniformly of a pure æneous hue, like the *S chalcites*, but I hardly think they are more than a variety of the present species. Nevertheless their third and fourth dorsal stræ are a little longer than is the case in the ordinary type, and their mesosternum has a slight tendency to be obsoletely punctured

### 289 *Saprinus erosus*, n. sp.

*S. niger* postice picescens, nitidus, fronte marginatâ, carinâ transversâ bisinuatâ, antice irregulariter transversim bistrigosâ, prothorace magno, convexo, leviter striguloso-punctato, in disco postico lævi, intra angulos anticos (obtusos) haud impresso, elytris postice in medio leviter et parce punctatis, stris profundis crenatis, humerali indistinctâ a subhumerali disjunctâ, 1<sup>ma</sup>—4<sup>ta</sup> dorsalibus paulo ultra medium postice continuatis, prosterno stris antice subapproximatis subparallelis, mox ante apicem confluentibus, ad basin paulo divergentibus, mesosterno longiusculo, impunctato, antennis pedibusque (crassis) rufo-piceis, tibus anticis pone apicem profunde erosis, ante excavationem dentibus 2 obtusis subconfluentibus et pone excavationem dente singulo obtuso armatis, posterioribus longe, dense et grosse ciliato-spinulosis, calcarebus posterioribus elongatis, robustis, tarsis valde incrassatis, setosis, subcomis — Long corp. lin 1½

*Habitat* Fuerteventuram, subrejectamentis per litora maris repertus

Had I but a single example to judge from, I might perhaps have been inclined to consider the curious excavation, or cavity, in the outer edge of the front tibiæ of this insect as accidental, but since it exists equally, and without the slightest variation, in six specimens from which the above diagnosis has been drawn out, I am compelled to regard it as a most remarkable specific feature. The two teeth, moreover, between this *sinus* and the apex are short, obtuse, and *subconfluent*, and a similarly blunt one exists behind it,—after which the margin is hardly perceptibly serrated. Apart, however, from this peculiarity of its anterior tibiæ, the *S. erosus* may be distinguished by its black but *posteriorly piceous* hue, by its large and convex prothorax, which has its front angles obtusely prominent (and *not* obliquely truncated), by its frontal keel being *bisinuated* (instead of straight), and its forehead branded with two rather irregular transverse strigæ, by its elytra being only lightly and *sparsingly* punctured behind, by its rufo-piceous legs being exceedingly thick and robust

—the four posterior tibiæ being densely armed with long spinules, and with their apical spurs largely developed, and by its feet being much incrassated, subconical, and more powerfully spinose beneath than is the case with the generality of the *Saprinæ*.

The *S. erosus* appears (like the following species) to be of *maritime* habits, as indeed the very robust structure of its greatly thickened four hinder legs, with their densely spinulose tibiæ and feet and somewhat largely developed apical spurs, would seem to indicate. My six specimens were all captured, from beneath marine *rejectamenta*, on the sandy beach at Coriajeo, in the extreme north of Fuerteventura.

#### 290 *Saprinus lobatus*, n. sp.

*S. nigro-æneus* (postice interdum piceus), nitidus, fronte marginatâ, carinâ transversâ rectâ, antice transversim bistrigosâ (stringâ posticâ plus minus obsoletâ), prothorace lævissimo (per marginem ipsisimum posticum serie punctorum solum notato), intra angulos anticos (porrectos, rotundatos) haud impresso, elytris postice in medio sat dense punctatis, striis profundis crenatis, humerali a subhumerali disjunctâ, 1<sup>mâ</sup>–4<sup>tâ</sup> dorsalibus vel versus vel paulo ultra medium postice continuatis, prosterno sinuato, antice valde desistente lobiformi, lineis ad basin paulo divergentibus, inde usque ad medium gradatim approximatis (fere confluentibus), dein vix divaricatis et ad apicem ipsum junctis, mesosterno impunctato, antennis pedibusque rufo-piceis, tibus anticis circa 6- (longe 3-) dentatis, posterioribus longe et dense ciliato-spinulosis, calcaribus posterioribus elongatis, parum robustis, tarsis elongatis, incrassatis, setosis, subconicis.—Long corp. lin 1½–2.

*Habitat* per oras arenosas maritimas Lanzarotæ, Fuerteventuræ et Canariæ, sub rejectamentis haud infrequens.

Although very closely allied to the European *S. maritimus* (= *sabulosus*, de Mars), it certainly would not be safe to refer the present *Saprinus* to that species. It may be known from it by its entire surface having a more or less conspicuous æneous tinge (though occasionally picescent posteriorly), instead of being black, by its elytra having their striæ rather shorter and considerably finer, and their punctuation denser and less coarse, and extending over a larger portion of the posterior disc, by the three apical teeth of its anterior tibiæ being perhaps a trifle longer, by its pronotum being rather more *narrowly* punctured along its extreme base, by its prosternum being somewhat more uneven, or sinuated, with its apex a little more prominent (or downwardly directed), and with its lines almost parallel (or not quite so approximated in the middle, and therefore not so perceptibly divergent *before* the middle), and by its mesosternum

being less coarsely bordered, especially in front, and always totally impunctate. Its smooth and shining prothorax (which has merely a row of punctures along its extreme hinder margin) will, apart from all other distinctions, at once separate it from the other *Saprima* here enumerated.

Like its more northern ally, the *S. lobatus* is purely a maritime species, occurring beneath marine and other rejectamenta on the sandy sea-shores. In such situations I have taken it in Lanzarote, Fuerteventura, and between Las Palmas and the Isleta of Grand Canary, in the second of which islands it was also found by Mr Gray. I have likewise captured it at Mogadore, on the opposite coast of Morocco.

### Genus 123 **XENONYCHUS** (nov. gen.)

*Corpus* ut in *Saprimo*, sed subtus valde convexum (meso- et metasternis abdomineque crassis inflatis) necnon subtus utrinque longissime pilosum. *fronte* marginata, valde depressa, *oculis* parvis, demissis, semicircularibus, sub frontis angulo laterali absconditis. *pronoto* ubique æqualiter punctulato, *prosterno* (ut in *Pachylopo*) valde carinato (*re* striis mox ante basin confluentibus, carinam acutam inde ad apicem efficientibus) *elytrorum striâ* etiam 5<sup>ta</sup> *dorsali* (*re* inter suturalem et quartam recurvam sita) haud omnino obsoleta, interdum parum distinctâ. *alis* magnis *propygidio* longiusculo. *Antennæ* fere ut in *Saprimo*, sed scapo pilis multo longioribus (sc longissimis) subtus et supra obsito. *Instrumenta cibaria* fere ut in *Saprimo*, sed *mandibulis* acutioribus necnon ad apicem multo magis et subito incurvis, longe infra apicem dente (in unâ magno, in alterâ minore obtuso) armatis, *palporum* (maxillarum ac labialium) *articulo ultimo* paulo longiore et omnino cylindrico, in *labialibus* multo majore et crassiore quam penultimo, *paraglossis* longissimis, usque ad basin articuli ultimi ductis. *Pedes* anomali, robustissimi, *posteriores* valde distantes et *postici* e coxis crassis alte conicis perpendicularibus surgentes. *femoribus* parce sed longe pilosis, *anticis* paulo longioribus quam *tibis intermediis* tibiarum longitudine, *posticis* ovatis brevioribus. *tibis anticis* versus apicem profunde tridentatis inde ad basin minute crenulatis, *posteriores* intra longissime sed parce pilosis, extus longe et densissime multispinulosi. *tarsis anticis* gracilibus, subcalvis, *posteriores* subincrassatis brevibus subconicis, art<sup>is</sup> 1<sup>mo</sup>—4<sup>um</sup> supra in medio pilo gracili sed infra ad apicem singulis setâ robustissima longissimis instructis, *tarsis omnibus* art<sup>o</sup> 1<sup>mo</sup> longiusculo, ultimo ovali *unguiculis* setiformibus rectis (sed in *anticis* ad apicem ipsum paulo inflexis) longissimis (sc articulo sublongioribus) instructis.

*Obs*—Genus corpore subtus convexissimo et longe sed parce piloso, coxis posticis valde distantibus incrassatis alte conicis perpendiculariter elevatis, tibis posterioribus super faciem internam pilis tenuibus longissimis instructis necnon unguiculis valde elongatis

setiformibus rectis inter Histeridas anomalum Prosterni forma antice acute carinati cum gen *Pachylopo* congruit, sed mandibulis ad apicem longe et subito inflexis acutis necnon intus dente armatis, pronoto ubique æqualiter punctulato, propygidio longiusculo, antennarum scapo pilis longissimis densius instructo, palporumque articulo ultimo cylindrico, in labialibus magno, a *Pachylopo* et *Saprimo* insuper dignoscitur

A ξένος, alienus, et ὄνυξ, unguiculus

The singular insect for which I have established the present genus resides about the drifting sand-hills of Fuerteventura, where it burrows at the roots of the various sand-plants which stud those arid maritime wastes, in company with the two anomalous *Curculionidæ* (one of them blind, and the other nearly so) which I described at considerable length in a recent Paper\* on the "Atlantic *Cossonides*", and, although exponents of families so remote from each other, one nevertheless cannot help remarking a certain curious analogy in several of the structural peculiarities of *all* these sand-infesting Coleoptera. Whether we regard indeed the enormous length of the hairs and cilia with which they are beset on portions of their surface and organs *which are not usually thus clothed*, or their unnaturally abbreviated antennæ and more or less diminished eyes, or their extraordinarily spinulose legs, and the fact of their feet being in every instance most wonderfully modified (either by additions to or detractions from what is normal in their respective central types), it is impossible not to be struck by the quaint and mysterious analogy which would seem to bind them together (however distant in affinity) into at any rate a *locally associated* assemblage.

Viewing the characters, however, of *Xenonychus* as compared with those of its actual allies, it is at once remarkable amongst the *Histeridæ* by the singular convexity of its body beneath (occasioned by the inflation of its meso- and meta-sterna and abdominal segments), and the thickened, conical, elevated form of its (most widely separated) posterior coxæ, by the enormously long hairs with which either side of its under surface, and the inner face of its four hinder tibiæ are studded, and by the wonderful construction of its tarsal claws, which are immensely long, slender and *setiform*, and (with the exception of the anterior pair which are *slightly* incurved at the apex) almost perfectly straight.

In minor details the genus is distinguished by its shortened antennæ (which have the scape beset with excessively long hairs) and

\* *Vide* Trans Ent Soc Lond (new series) v pp 388, 394

small semicircular eyes, which are concealed beneath the lateral angles of the forehead, by its prosternum being sharply keeled in front (as in *Pachylopus*), by its prothorax being densely and equally punctulated throughout, and the four dorsal stræ of its elytra entire, by its propygidium being less abbreviated than is ordinarily the case, by its mandibles being exceedingly acute, greatly and suddenly incurved at their apex, and armed with a tooth internally, and by the ultimate joint of its palpi being perfectly cylindric, and in the labial pair somewhat enlarged

### 291 *Xenonychus fossor*, n. sp

X piceo-niger, subnitidus, ad latera ipsissima longissime fulvo-ciliatus, fronte impunctatâ, carinâ transversâ tenui subobsoletâ bisinuatâ, prothorace densissime sed levissime punctulato (punctis serratulis et minus impressis sed vix minutis), elytris in medio (præsertim postice) sat profunde punctatis, stris profundis crenatis, humerali in subhumeralem mergente, 1<sup>mâ</sup>—4<sup>tam</sup> dorsalibus postice ad apicem continuatis suturali tenui integrâ cum 4<sup>tâ</sup> dorsali ad basin junctâ, necnon in spatio inter suturalem et quartam stria 5<sup>tâ</sup> plus minus indistinctâ antice evanescente impressis, mesosterno sat profunde punctato, apice late sed leviter excavato, antennis brevibus, flavo-piceis, pedibus robustissimis, rufo-piceis — Long corp lin  $1\frac{1}{2}$ — $1\frac{2}{3}$

*Habitat* Fuerteventuram, præsertim ad radices plantarum (*Zygophyllum Fontanesi*, Webb, et cæt.) in arenosis aridis submaritimis crescentium fodiens

As already stated, this curious insect is found in the dry sandy regions of Fuerteventura adjoining the coast. It was taken, sparingly, both by Mr Gray and myself, around the roots of *Zygophyllum Fontanesi* and other shrubby plants, on the exposed sand-hills about a mile to the south of Puerto de Cabras, during February 1858

### Genus 124 EUBRACHIUM

Wollaston, *Trans Ent Soc Lond* (3rd series) 1 159 (1862)

### 292 *Eubrachium punctatum*.

*Eubrachium punctatum*, Woll, *Trans Ent Soc Lond* (3rd series) 1 162 (1862)

*Habitat* in lauretis Teneriffæ et Palmæ, sub cortice arborum laxo humido, rarissime

I have pointed out the distinctive characters of the present and two following species in a paper which has lately been published in the 'Trans of the Ent Soc of London'. The *E. punctatum* appears

to be of the greatest rarity, and confined (so far as I have observed hitherto) to the laurel-regions of Teneriffe and Palma. In the former, I have taken it at the Agua Garcia, at Las Mercedes, and in the forest above Taganana, and in the latter, at a rather high elevation in the Barranco de Galga. It occurs principally beneath the loose, damp, rotten bark of trees.

### 293 *Eubrachium ovale*.

*Eubrachium ovale*, *Woll, Trans Ent Soc Lond* (3rd series) 1 161 pl vii f 9 (1862)

*Habitat* in Hierro, sub cortice *Euphorbiarum* laxo putrido in regione El Golfo repertum.

The only island in which I have as yet observed this interesting little insect is Hierro—where, during February 1858, I captured several specimens of it, from beneath the rotten bark of old *Euphorbias*, in the lower part of the region of El Golfo.

### 294 *Eubrachium politum*.

*Eubrachium politum*, *Woll, Trans Ent Soc Lond* (3rd series) 1 163 (1862)

*Habitat* in Lanzarota et Hierro, in usdem locis ac præcedens, rarissimum.

Of the present *Eubrachium* four specimens only have hitherto come beneath my notice. One of them I took on the *Euphorbia*-clad cliffs (known as the "Risco") overlooking the Salinas, in the extreme north of Lanzarote, and the other three, in company with the last species, at El Golfo, on the western side of Hierro.

## Genus 125 *ACRITUS*.

Le Conte, *Proc of the Acad of Philad* iii 288 (1853)

§ I *Prothorax lineâ punctorum ante basin haud impressus*

### 295 *Acritus punctum*

*A. oblongus*, fusco-niger, nitidus, fronte minutissime et parce punctulata, oculis sat magnis prominulis, minute et parce setosis, prothorace elytrisque distinctius sed parce punctatis, illo antice et postice subæqualiter latiusculo, lateribus ipsis paulo sinuatis et striâ integrâ impressis, his versus humeros obsolete oblique striatis, prosterno et mesosterno vix punctatis, illo stris integris, a basi usque ad apicem gradatim arcuato-divergentibus, hinc antice integro obtuse lobato, ad latera marginato, suturâ posticâ indistinctâ, metasterno magno, punctato, pygidio et propygidio densissime subtilissimeque transversim rugatis sed haud punctatis, antennis pedibusque piceo-ferrugineis, tibiis anticis arcuatis, extus minutissime

spinulosis et ante apicem subito dilatatis, posterioribus subrectis, parce ciliato-spinulosis —Long corp lin  $\frac{2}{3}$

*Abraeus punctum*, *Aube, Ann de la Soc Ent de France*, 232 (1842)

*Acrutus punctum*, *de Mars, ibid*, 607 (1856)

*Habitat* Lanzarotam, per oram arenosam maritimam prope oppidum Arrecife sub fucis captus

Its oblong, entirely punctulated body, its freedom from a punctured subbasal prothoracic line, and the shape of its sterna, no less than its maritime habits, prove the present *Acrutus* to be identical with the *A punctum* from the south of Europe—of which I have lately received four examples from A H Haliday, Esq, taken by himself in Italy, nevertheless many of its most important characters are totally unalluded to by De Marseul. Thus, he expressly says, of the *punctum*, “Front convexe, saillant sur les yeux”, whereas in reality the forehead is depressed, and the eyes are not only large and prominent, but also (which is a most unusual feature) minutely and sparingly *setose*\*. Again, he states, “pygidium et propygidium très finement ponctués”, whereas there is not the vestige of a puncture on that portion of the surface (which is closely and delicately transversely-rugulose). And, lastly, he speaks of the colour of the limbs as pale-testaceous, whereas they are piceo-ferruginous. In addition to these discrepancies, I should add that he makes no mention of the *arcuated* and rather *suddenly dilated* anterior tibiae, which constitute one of its most conspicuous peculiarities. Nevertheless the Canarian insect is clearly identical with the *A punctum*, with which (as just stated) it likewise agrees in its mode of life. Indeed the only six specimens which I have seen were captured, by myself from beneath sea-weed on the sandy beach close to Arrecife of Lanzarote, and in the ‘Faune Française’ the *habitat* given for the *punctum* is “La Teste, sous les algues”.

## § II *Prothorax lineá punctorum ante basia impressus*

### 296 *Acrutus minutus*

*Hister minutus*, *Hbst, Natur syst* iv 41 tab 36 f 4 (1791)

*Acrutus minutus*, *de Marseul, Ann de la Soc Ent de France*, (3<sup>ieme</sup> série) iv 614 (1857)

— —, *Woll, Cat Mad Col* 76 (1857)

*Habitat* in Fuerteventura Canaria Teneriffa, Gomera et Palma, sub quisculnis, passim

\* I can recall but few Coleopterous insects in which this structure exists—indeed the only ones that I now recollect, in which it obtains are *Litargus* and my genus *Tarphiodes* (from the Malay Peninsula)

The common European *A minutus* (which occurs in Madeira and Porto Santo, and which I have also taken at Mogadore, on the opposite coast of Morocco) is probably universal in these islands, though from its small size it is very liable to escape observation. Hitherto, however, I have myself met with it only in Fuerteventura, Grand Canary, Teneriffe, and Palma, but I have received specimens which were found by Dr Crotch in Gomera. My Fuerteventuran examples are from the Rio Palmas, and the Teneriffan ones from Orotava, the Agua Garcia, and Ycod el Alto.

## Fam. 24. THORICTIDÆ.

### Genus 126 THORICTUS

Germar, *in Silb Rev Ent* 11 2 15 (1834)

#### 297 *Thorictus gigas*.

*T* quadrato-oblongus, rufo-piceus, nitidus, minute et parce asperato-punctatus, subtiliter fulvescenti-pubescent, prothorace brevi, transverso, in disco postico convexo, ad latera valde rotundato dilutius vix subpellucido, angulis posticis obtusis, elytris piceis, ad humeros callosos-incrassatis et ibidem obtuse prominentibus, in disco valde convexis, ad basin ipsissimam lineâ mediâ sinuatâ terminatis necnon utrinque breviter longitudinaliter bicostatis, pedibus longiusculis.—Long corp  $ln\ 1\frac{1}{4}$ —vix  $1\frac{1}{2}$

*Thorictus gigas*, Woll, *Ann Nat Hist* (3d series) ix 439 (1862)

*Habitat* Canariam Grandem, in formicarum nidis rarissimus

The large size of this gigantic *Thorictus* and its *relatively* shorter and more transverse prothorax (which is slightly subpellucid towards the edges and has its posterior angles obtuse), combined with its greatly prominent *nodiform* shoulders, the very distinct biflexuose costa with which the central portion of the *extreme* base of its elytra is terminated, its conspicuous subhumeral plicæ, and its comparatively elongated legs, will readily characterize it. The punctules of its upper surface, although small and distant, are sharply defined and somewhat *asperate* (the anterior edge of each being a little raised), and they are much denser on the humeral callosity than elsewhere. It is apparently of the greatest rarity, and confined (so far as I have observed hitherto) to Grand Canary—in which island I have taken it sparingly, from out of the nests of a large brown Ant (a *Formica*) on the mountains above San Mateo, as well as on the northern side of the Barranco at Aldea de San Nicholas. It is about the size of the *T Germani*, Lucas, from Algeria (of which a specimen has been communi-

cated to me by Mr Janson), but is totally distinct in all its characters—of colour, outline, sculpture, clothing, proportions, and the inequalities of its surface

### 298 *Thorictus canariensis*.

*T* oblongus, rufo-piceus, nitidus, minutissime et parce punctulatus, subtilissime (oculo fortiter armato) cinereo-pubescent, prothorace convexo, ad latera valde rotundato, angulis ipsis posticis oblique impresso-marginatis, elytris piceis, antice subparallelis, in disco valde convexis, ad basin lineâ mediâ vix terminatis sed utrinque breviter longitudinaliter subcostatis, pedibus brevibus

*Var* *at* capite prothoraceque plus minus rufescentioribus necnon regione scutellari plus minus obliquo-desistente

*Var*  $\beta$  *obsitus* [an species distincta?] Prothorace vix rufescentiore, paulo distinctius punctato, versus utrumque latus obsoletissime impresso, elytris vix angustioribus, pube longiore erectâ irroratis, versus humeros paulo evidentius subplicatis—Long corp lin  $\frac{3}{4}$ —vix 1

*Thorictus canariensis*, *Woll*, *Ann Nat Hist* (3rd series) ix 439 (1862)

*Habitat* insulas omnes Canarienses, sub lapidibus in formicarum nidis hinc inde parum vulgaris *Var*  $\beta$  ad locos editiores Teneriffæ necnon ad Gomeram pertinet

In its general outline and very minutely punctulated surface the present *Thorictus* closely resembles the Sicilian *T. grandicollis*\* It differs from it, however, in being, on the average, of a distinctly darker hue (though the head and prothorax, nevertheless, are more or less rufescent), in having the sides of its pronotum a little rounder behind, with the posterior angles more conspicuously depressed by an oblique marginal band (which lops them off on their upper surface), in its elytra being almost free from the minute central line which terminates the middle portion of their extreme base in that species, and with the short subhumeral (posteriorly evanescent) costæ perhaps somewhat less developed, and by its surface being very delicately and sparingly pubescent, whereas in the *grandicollis* I cannot detect, except at the lateral margins, the slightest trace of pile even under the highest microscopic power It is also very nearly allied, both in aspect and hue, to the *bicolor* of Kraatz, from Greece and Sicily (*vide* Berl Ent Zeit 1858, p 141)—for types of which I am indebted to

\* The Madeiran *T. Westwoodi* differs from the *canariensis*, in being paler and a little more strongly punctured, in having its prothorax still more rounded at the sides, and its scutellum (although very minute) quite traceable beneath a high magnifying power, in the small elevated line with which the central portion of the extreme base of its elytra is terminated being distinctly developed, and in its antennæ and feet (particularly the hinder pair) being shorter and thicker

Dr Schaum, nevertheless it has its elytra just perceptibly narrower and longer than is the case in that species, as also less ventricose on their hinder disc (or less incurved posteriorly), very much less plicate at the shoulders, and with the *extreme* basal rim less elevated, the anterior angles of its prothorax are somewhat more rounded off, and its tarsi are a trifle longer and slenderer

I have given a provisional name, in the event of their proving to be specifically distinct, to the specimens which I have regarded as the "*var*  $\beta$ " I think, however, it would be scarcely safe, at any rate until further evidence is obtained, to treat them as more than a local modification, though, at the same time, when viewed even beneath an ordinary lens, they are easily separable from the normal examples They have been taken hitherto only in Gomera and the higher regions of Teneriffe, and differ in having their prothorax a trifle more evidently punctured, and their elytra (which are perhaps just perceptibly narrower, and have their abbreviated subhumeral plicæ rather more developed) sparingly beset with comparatively long and erect hairs

The *T. canariensis* is *universal* throughout the archipelago, though, at the same time, I should state that the only example which has hitherto been taken in Gomera belongs to the "*var*  $\beta$ " (which, as already implied, may *possibly* be distinct) I have captured it, however, in its normal state, on the rocky ground immediately behind the Salinas, in the extreme north of Lanzarote (where a single specimen was first detected by Mr Gray, during January 1858), at La Antigua, and in the Rio Palmas, of Fuerteventura, at a high elevation, close to the Roca del Soueilho, on the mountains of Grand Canary, near the Puerto Orotava, in Teneriffe, in the Barranco above S<sup>ta</sup> Cruz, of Palma, and near Valverde, in Hierro It occurs beneath stones, and either actually in Ants' nests or in the immediate vicinity of them

Of the "*var*  $\beta$ " a single specimen was found by Mr Gray in the Barranco above San Sebastian, of Gomera, and I have myself taken it in Teneriffe—namely at the Agua Mansa, and on the lofty Cumbie (adjoining the Cañadas) above Ycod el Alto, at an elevation of more than 8000 feet

#### 299 *Thorictus vestitus*, n sp

*T. præcedenti similis, sed vix minor angustior, paulo minus nitidus (oculo fortissime armato minutissime alutaceus), profundius punctatus et pube elongatâ robustâ demissâ fulvescente ubique parce vestitus, prothorace ad basin ipsissimam paulo magis constricto, elytris ad basin ipsissimam lineâ tenuissimâ (subobsoletâ, vix ob-*

servandâ) in medio paulo arcuatâ terminatis, versus humeros vix distinctius subplicatis, regione scutellari obliquo-desuliente —Long corp.  $ln \frac{3}{4}$

*Habitat* Lanzarotam, sub lapidibus in saxosis submaritimis inter Hama et Barranquillo d 15 Mart A D 1859 reperiuntur

From out of a large number of the *T canariensis*, collected throughout the archipelago, I find three specimens, captured in Lanzarote, which differ very considerably from the remainder, and from these the above diagnosis has been compiled. Nor can I believe them to be any local phasis of that insect, since I have taken the *T canariensis* (in its most typical state) in Lanzarote also, and therefore exposed to the same external influences as the *vestitus*. The characters which distinguish the latter are its stronger punctation (which is very evident when viewed under a high magnifying power) and less shining surface, its just perceptibly smaller and relatively narrower outline, and (more especially) the long, coarse, *decumbent* fulvescent pile with which it is sparingly clothed. Its prothorax, also, is a trifle more constricted at its extreme base, and its elytra are rather more *uneven* (or longitudinally subplicate) towards either shoulder, and have just traceable indications, beneath the microscope, of being terminated by a minute basal line—behind the central (obsolete) portion of which the scutellary region is more sloping, or obliquely-depressed.

My three specimens of the *T vestitus* were captured, from beneath stones, in the submarine district adjoining the coast-road between Hama and Barranquillo, in the north-east of Lanzarote, on the 15th of March 1859.

## Fam. 25. APHODIADÆ.

Genus 127 APHODIUS.

Hilger, *Kaf Preuss* 1 28 (1798)

### 300 Aphodius hydrochæris.

Scarabæus hydrochæris, *Fab, Ent Syst Suppl* 23 (1798)

Aphodius hydrochæris, *Woll, Ins Mad* 222 (1854)

— — —, *Id, Cat Mad Col* 78 (1857)

— — —, *Hantung, Geolog Verhaltn Lanz und Fuert* 140 et 141

*Habitat* insulas Canarienses, in Palma solâ adhuc haud detectus

The *A hydrochæris*, which is general throughout southern Europe and northern Africa and which is tolerably common in the Madeiran Group, is almost certainly *universal* in these islands,—though hitherto

it does not happen to have been observed in Palma But in Lanzarote, Fuerteventura, Grand Canary, Teneriffe, and Hierro I have myself taken it, more or less abundantly, and in Gomera it was found by Dr Crotch In Teneriffe it was also captured by Dr Crotch and Mr Gray Apart from minor distinctions, it may be known from the other *Aphodius* here enumerated by its larger size and less shining surface, by its dull, brownish-testaceous hue and densely punctured scutellum, and by its anteriorly margined prothorax

### 301 *Aphodius Wollastonii*.

*A. elongatus*, ovato-oblongus (antice subangustatus), nitidus, testaceus, clypeo (rugoso, utrinque ante oculos angulato-exstante), scutello pedibusque picescentioribus, capite postice, prothorace in dorso late necnon in nebulâ parvâ sublateralî elytrisque anguste per suturam nigrescentibus, prothorace breviusculo, leviter inæqualiter punctato, elytrorum striis subtenuibus, interstitiis minutissime et parce punctulatis, palpis antennisque pallide testaceis, tibus posterioribus, sed præsertim intermediis, longe spinulosis

*Mas* tuberculis frontalibus (præsertim medio) distinctioribus, prothorace vix latiore subtiliusque punctato—Long corp lin  $2\frac{1}{2}$ – $3\frac{1}{2}$

*Aphodius Wollastonii*, *Harold, Berl Ent Zeit* 397 (1862)

*Habitat* Lanzarotam et Fuerteventuram, in stercore bovino, equino, camelino, tempore vernali parum vulgaris

In size and general colouring the present *Aphodius* is somewhat intermediate between the *A. hydropicæ* and *nitidulus*, its surface, however, is brighter and less deeply sculptured, and its colour is altogether clearer, than that of the former, and moreover its pronotum is unmargined anteriorly, its scutellum is more sparingly punctured, and its elytral striæ are narrower, whilst its prothorax (which has only a broad cloudy band down the disc, and a small ill-defined spot towards either side, piceous-black) is very much paler than that of the latter From both of them, however, its anteriorly subacuminated outline and more roughened clypeus, combined with its very pale antennæ and the much longer spinules of its four hinder (though more particularly of its intermediate) tibiæ, will additionally distinguish it It is rather a common insect in Lanzarote and Fuerteventura during the spring months, in the former of which it was also captured by Mr Gray, but I have not yet observed it in any of the other islands of the Group

### 302 *Aphodius nitidulus*

*Scarabæus nitidulus*, *Fab, Ent Syst* 1 30 (1792)

*Aphodius sordidus*, *Bulle [nec Fab], in Webbet Berth (Col)* 60 (1838)

*Aphodius nitidulus*, *Woll, Ins Mad* 223 (1854)

— —, *Id, Cat Mad Col* 78 (1857)

*Habitat* insulas omnes Canarienses, in stercore bovino vulgaris

This common European insect, which abounds throughout the Madeiran Group, is *universal* at the Canaries—in the whole seven islands of which I have myself taken it, more or less profusely. In Lanzarote and Gomera it was also found by Mr Gray, and in Gomera and Teneriffe by Dr Crotch.

### 303 *Aphodius tæniatus*, n sp

*A* cylindricus, nitidissimus, capite, prothorace (convexo, latiusculo, leviter inæqualiter punctato, versus latera sola pallidior) elytrisque late per suturam nigris, clypeo ad latera picescente, recurvo, elytrorum stris tenuibus, interstitis subdepressis minutissime et sat dense punctulatis, pedibus picescentibus, tarsis, antennis palpisque infuscato-testaceis

*Mas* tuberculis frontalibus (præsertim medio) distinctioribus, prothorace vix latiore subtiliusque punctato — Long corp lin 2-2½

*Habitat* Lanzarotam et Fuerteventuram, unâ cum *A Wollastonii* degens

The rather small size and cylindric outline of this *Aphodius*, in conjunction with its very convex prothorax, which (together with the head, scutellum, and a broad sutural band) is black except at the extreme edges, its fine elytral striæ, its somewhat more densely (though equally minutely) punctulated interstices, and its rather darker femora and tibiæ, will serve to separate it from the other species here enumerated. In colouring and general aspect it resembles a good deal the common European *A merdarius*, nevertheless it is a little larger, more cylindric, and much more shining than that insect, its clypeus (which is subpicescent) is more truncated at the apex and more recurved at the sides, its prothorax is more convex, its elytral interstices more depressed, its head is broader and with the frontal suture and tubercles (instead of being obsolete in both sexes) well developed in the males, and its antennæ and palpi are paler.

The *A tæniatus* I have observed hitherto only in Lanzarote and Fuerteventura, where it occurs, during the spring months, in company with the *A Wollastonii*, it is, however, the rarer of the two species.

### 304 *Aphodius maculosus*, n sp

*A* elongatus, nitidus, capite lato piceo, clypeo (ante oculos angulato-exstante) rufescentiore, prothorace (sat profunde inæqualiter punctato) fusco-piceo ad latera late (necnon sæpius per basin ipsissimam anguste) testaceo et utrinque maculâ parvâ mediâ nigres-

cente ornato, scutello fusco-piceo, elytris pallide testaceis, singulis maculis parvis irregularibus nigrescentibus (circa 5) ornatis, interstitiis alutaceis convexis minutissime punctulatis, antennis, palpis pedibusque subpicescenti-testaceis, tarsis elongatis, articulo primo in posterioribus longissimo

*Mas* tuberculo frontali paulo distinctiore, prothorace vix latiore subtiliusque punctato — Long corp lin  $2\frac{1}{4}$ — $2\frac{3}{4}$

*Aphodius conspurcatus*, Brulle [nec Linn], in *Webb et Berth* (Cal) 60 (1838)

— sticticus, Hart [nec Pnz], *Geolog Verhalt'n Lanz und Fuert* 140

— maculosus, Harold, in *litt*

*Habitat* in Lanzarota et Fuerteventura sat vulgaris, necnon in Canaria Grandi rarior, in stercore humano præsertim gaudet

The present *Aphodius* may be regarded as the representative in these islands of the European *A. inquinatus*, which at first sight it much resembles. It is, however, a little larger and more elongate than that insect, its surface is more alutaceous (and therefore somewhat less shining), its elytra are of a pale yellow and with their small broken patches less developed (the elongate dash within the lateral margin of that species being entirely absent), its head and prothorax are less black (the former having the clypeus rufescent, and the latter being much more broadly pale at the edges and with the extreme basal margin more or less testaceous, whilst even the darker portions are merely of a brownish-piceous hue), its elytral interstices are more convex, and its antennæ, palpi, and legs are paler.

From the *A. conspurcatus*, Linn, judging from specimens which I have received from Bordeaux (and which I believe to be correctly identified), the *A. maculosus* is abundantly distinct,—differing from it, apart from minor characters, in its larger size and more pallid hue, in its more developed clypeus and head, in its more convex elytral interstices, and in its paler and longer limbs—the basal joint of its four hinder feet being more particularly elongate, and the tibial spurs proportionally enlarged.

The *A. maculosus* is common in Lanzarote and Fuerteventura during the spring (in the former of which it was also taken by Mr Gray, and in both by M. Hartung), and I have likewise captured it, though very sparingly, in the south of Grand Canary. Having received it from Dr Heer under the name of "*sticticus*, Pnz," I am enabled to state for certain that it is the *Aphodius* referred by him (though erroneously) to that species in the list compiled for M. Hartung's volume, and there can be no doubt whatsoever that it is also the *A. conspurcatus* of M. Brullé's inaccurate Catalogue in the work of Messrs. Webb and Berthelot.

305 *Aphodius lividus*.

- Scarabæus lividus*, *Ohv*, *Ent* 1 3 86 (1789)  
 — *bilituatus*, *Mshn*, *Ent Brit* 1 15 (1802)  
*Aphodius lividus*, *Woll*, *Ins Mad* 225 (1854)  
 — —, *Id*, *Cat Mad Col* 78 (1857)

*Habitat* Canariam, Teneiffam, Gomeram et Palmam, in steicore,  
 iarius

The European *A lividus*, which occurs sparingly in Madeira and Porto Santo, and which I have taken at Mogadore on the opposite coast of Morocco, is decidedly rare in these islands. I have, however, captured it in the region of El Monte in Grand Canary, near the Puerto Orotava of Teneriffe, and below Argual (in the district of the Banda) on the western side of Palma, and I have received examples which were found by Dr Crotch in Gomera. The Palman specimens are unusually dark, but it is a variable species as to colour. Its more or less livid hue, however, in conjunction with its short outline, its highly polished and comparatively unpunctured surface, and the unmargined hinder edge of its pronotum, will readily distinguish it from the other *Aphodii* here enumerated.

306 *Aphodius granarius*

- Scarabæus granarius*, *Linn*, *Syst Nat* 1 11 547 (1767)  
*Aphodius carbonarius*, *Brulle*, in *Webb et Berth* (Col) 60 (1838)  
 — *granarius*, *Woll*, *Ins Mad* 226 (1854)  
 — —, *Id*, *Cat Mad Col* 79 (1857)

*Habitat* insulas omnes Canarienses, vulgaris

This common European *Aphodius*, which abounds in the Madeiran Group and which is recorded by M Morelet at the Azores, is *universal* at the Canaries—in all the islands of which I have myself met with it except Gomera, where however it has been found lately by Dr Crotch. In Lanzarote it was captured also by Mr Gray, and in Teneriffe by Dr Crotch and the Barão do Castello de Paiva. It may be known at once from all the foregoing species by, *inter alia*, its totally black hue.

Genus 128 **OXYOMUS**

(Eschscholtz) De Castelnau, *Hist* 11 98 (1840)

307 *Oxyomus brevicollis*

- Oxyomus brevicollis*, *Woll*, *Ins Mad* 229 (1854)  
 — —, *Id*, *Cat Mad Col* 79 (1857)

*Habitat* Gomeram et Palmam, in illâ a Dom Crotch, in hac a Dom Gray repertus

The only Canarian examples which I have seen of this insect

(which is tolerably common around Funchal, in Madeira) were captured in Gomeira by Dr Crotch (near the sea-shore below Hermigua), and in Palma by Mr Gray—who took a single specimen in that island, during February 1858

### Genus 129 **PSAMMODIUS.**

Gyllenhal, *Ins Suec* 1 6 (1808)

#### 308 **Psammodius cæsus**

*Scarabæus cæsus*, *Pnz, Fna Ins Germ* 35 2 (1796)

*Psammodius cæsus*, *Erich, Nat der Ins Deutsch* iii 913 (1848)

— —, *Woll, Ins Mad* 231 (1854)

— —, *Id, Cat Mad Col* 79 (1857)

*Habitat* in Lanzarota et Canaria, sub quisquilis, minus frequens

The European *P cæsus* (which occurs also in the north of Africa and in Madeira) is apparently scarce, or at any rate very local, in these islands. I have taken it in the north of Lanzarote, and about Las Palmas in Grand Canary

#### 309 **Psammodius sabulosus**

*Oxyomus sabulosus*, *Dej Cat* (edit 3) 163 (1837)

*Platyomus sabulosus*, *Muls, Lamell de France*, 310 (1842)

*Psammodius sabulosus*, *Woll, Ins Mad* 230 (1854)

— —, *Id, Cat Mad Col* 79 (1857)

*Habitat* insulas Canarienses, in Palma solâ adhuc haud detectus, sub quisquilis (præsertim in arenosis) hinc inde occurrit

The *P sabulosus* is eminently an insect of Mediterranean latitudes, being found in the south of Europe, the north of Africa, and in the Madeiran Group. Like the last species it is very local in this archipelago, though not rare in the districts where it occurs, and we may be quite certain that it is universal, Palma being the only island where it has not hitherto been observed. I have taken it in Lanzarote, Fuerteventura, in the sandy region between Las Palmas and the Isleta of Grand Canary, near Sta Cruz and Orotava in Teneriffe, and also in Hierro, and it was captured by Dr Crotch near Hermigua in Gomeira

#### 310 **Psammodius porcicollis**

*Aphodius porcicollis*, *Illg, Mag fur Ins* ii 195 (1803)

*Psammodius porcicollis*, *Muls, Lamell de France*, 322 (1842)

— —, *Lucas, Col de l'Algerie*, 267 (1849)

— —, *Woll, Cat Mad Col* 80 (1857)

*Habitat* in arenosis (præsertim maritimis) Lanzarotæ et Fuerteventuræ, sub quisquilis necnon ad radices plantarum fodiens

The geographical range of the *P poracollis* is almost identical with that of the last species, being found, like it, in the south of Europe and the north of Africa. At the Madeiran Group it occurs about the roots of sand-plants behind the sea-beach in Porto Santo, and at the Canaries I have taken it in precisely similar situations—near Arrecife of Lanzarote, and (more particularly) at Corralejo, in the extreme north of Fuerteventura.

## Fam. 26. TROGIDÆ.

### Genus 130 TROX.

Fabricius, *Ent. Syst.* 1: 86 (1792)

#### 311 *Trox confluens*, n. sp.

*T.* subovato-oblongus, niger, marginibus longe fulvo-ciliatis, clypeo apice subporrecto acutiusculo, prothorace inæquali sat dense inæqualiter punctato, elytris singulis 10-striatis (striis latis, utrinque costula marginatis), interstitiis depressis subnitidis seriatim tuberculatis (serie alterna majore), tuberculis singulis postice parce et breviter fulvo-fasciculatis, antennis rufo-ferrugineis tassis piceis, tibus anticis subgracilibus, processu obtusissimo (e dentibus duobus omnino suffusus confluentibus composito) extus terminatis et pone hunc dentibus duobus brevibus valde obtusis armatis — Long. corp. lin.  $3\frac{2}{3}$

*Trox hispidus*?, Brullé [nec Fab.], in Webb et Beith (*Col.*) 60 (1838)

*Habitat* Teneriffam, juxta oppidum Sanctam Crucem exemplar unicum cepti

After comparing this *Trox* carefully with the types of no less than nine species which have been lent me by Dr. Schaum, and four more in my own possession, I cannot identify it with any of them, and although I have unfortunately but a single example to compile my diagnosis from, I am nevertheless compelled to regard it as new. Indeed, in the structure of the tooth at the outer apex of its front tibiae it differs from all the members of the genus to the descriptions of which I have had access, for whilst that process is composed normally of two teeth more or less subconfluent (and usually very distinct from each other), in the present species (judging from the individual before me) they are *completely* suffused, so as to form a single obtuse projection having no appearance whatsoever of being *even obsoletely* bipartite. In other respects the *T. confluens* is about the size and general outline of the European *T. sabulosus*, but is rather more oblong and much less coarsely (and differently) sculptured. Al-

together it seems to approach nearer, *primâ facie*, to the *T. matus* of Mulsant, from Syria, than to any other, perhaps, with which I have compared it, but the *clearly*-defined sculpture of its elytra, which have their ten striæ broad, unconfused, and sharply expressed and their tubercles well marked and isolated (the alternate series moreover differing less considerably in size from the remainder), will, apart from the structure of its tibiæ and numerous minor characters, readily separate it both from that insect and from others to which it is in some respects allied. My unique specimen was captured, from beneath a stone, at a low elevation in the Barranco do Passo Alto, near S<sup>ra</sup> Cruz of Teneriffe. I have little doubt that it is the species referred by M. Brullé to the *T. hispidus*, F.—from which however it is totally distinct.

## Fam. 27. MELOLONTHIDÆ.

### Genus 131. OOTOMA

Blanchard, *Cat. Col. Ent.* 120 (1850)

The present genus is regarded by Lacordaire as a mere Section of *Pachydema*, in which the *front* tarsi only (instead of the anterior *four*) have their second and third joints dilated in the males, nevertheless, since he seems to have overlooked one or two of its most important features, which equally escaped the notice of M. Blanchard (by whom the group was enunciated, from Messrs Webb and Berthelot's Canarian types which still exist at the Jardin des Plantes), I think it may be desirable to retain it as distinct, more particularly since the insects which compose it form a small geographical assemblage apparently peculiar to these islands. The structural character to which I especially allude, and which I am not aware obtains in *Pachydema* proper, is the immense *sexual* difference in the development of the last joint of the maxillary palpi—which is more or less greatly enlarged in the males, but comparatively cylindric in the females. With respect to its feet, Prof. Lacordaire is not quite correct when he says “les tarsez antérieurs sont simples et sans brosses de poils chez la seule de leurs femelles qui soit connue”, for the front pair have in *both sexes* their four basal articulations clothed beneath with short densely-set setæ (though of course *less* so in the females), whilst even the intermediate pair have their second and third joints (though scarcely, in the *female sex*, then first and fourth) sparingly setose. So that the generic diagnosis of *Ootoma* requires revising, as regards the sexual peculiarities both of its feet and palpi.

M. Blanchard was clearly wrong (as indeed Prof. Lacordaire has

remarked) in stating that the antennæ of *Ootoma* are 9-articulate for they have distinctly ten joints,—the pentaphyllous club appropriating (as in *Pachydema*) five of them Both sexes are winged, and the habits of the species (which have very much the external aspect of the *Elaphocera*) are subterraneous, like those of the earth-boring *Rhizotrog* (= *Geotrogus*, Guérin) of northern Africa

Were it not that M. Brullé expressly mentions that he had not seen the female of his *Melolontha* (*Ootoma*) *obscura*, I should have concluded that the difference to which he calls attention, in the fact of the maxillary palpi of that species having their terminal joint *but very slightly wider than the preceding one*, and which he regards as abnormal, was simply due to his having drawn up his diagnosis *from a female specimen*, but as the great length of its antennal clava necessarily implies that it was a male one, this hypothesis is hardly tenable

§ I *Scutellum impunctatum, sed lineis duabus obliquis postice conneris impressum*

a *Tarsorum intermediorum masculorum ant penultimus  
subtus vix setoso-pennicillatus*

### 312 *Ootoma bipartita*

*O* nigra, nitida, subtus (abdomine excepto) necnon supra ad margines longe subnigrescenti-pilosa, elytris rufo-castaneis, capite densissime punctato, clypeo recurvo ad latera ampliato, a fronte linea obsoletâ diviso, prothorace dense punctato, elytris parcius subrugoso-punctatis, singulis striâ suturali sat profunda lineisque tribus obsoletis instructis pedibus piceis, tarsis clarioribus, palpis antennisque rufo-testaceis, clava pallidiore

*Mas* plerumque minor, pygidio propygidioque subtilius punctatis, antennarum clava elongata, palporum maxillarum articulo ultimo lato obovato

*Fœm* plerumque major, pygidio propygidioque profundius punctatis, antennarum clavâ breviori palporum maxillarum articulo ultimo subcylindrico (quam præcedens vix crassiore), versus apicem subincrassato — Long corp lin 5-5½

*Melolontha bipartita*, Brulle, in *Webb et Berth* (Col) 60 (1838)

*Ootoma bipartita*, Blanch, *Cat Col Mus de Paris*, 120 (1850)

*Melolontha bipartita*, Hartung, *Geolog Verhålt Lanz und Fuert* 140 et 141

*Habitat* Lanzaroteam et Fuerteventuram (rarius Canariam et Teneriffam), in cuniculis fodiens

Although the descriptions which M. Brulle intended to apply to

his four Canarian *Melolonthidæ*\* are both inadequate and inaccurate—and from which the identification of the species is rendered even still more hopeless by his entire omission (as is the case throughout the *whole* of his Catalogue) of the particular *islands* which they inhabit,—I think that the fact of his mentioning that the *M bipartita* has its head and prothorax “noirâtres” is sufficient to render it at least *probable* that that insect is identical with the present one

Although excessively inconstant, both in size and in the development of its (*more or less* darkened) pile, the present species may be known from the *O fuscipennis* (with which it agrees in its usually quite impunctate but bumpressed scutellum) by, apart from minor distinctions, its head, prothorax, and scutellum being of a blackish hue, whilst its elytra are rufo-castaneous, by its pubescence (especially on the under side of the body) being generally darker, by its pronotum being just perceptibly more densely punctured, and by the last joint of the maxillary palpi of its males being less enormously enlarged, whilst those of its females are likewise a little narrower—being (instead of oblong or suboval) nearly cylindric

The *O bipartita* occurs principally in Lanzarote and Fuerteventura (especially the former), nevertheless I have taken it sparingly in Grand Canary, as also a single specimen in Teneriffe. It is found, for the most part, in small holes, or burrows, in the soil,—either beneath stones or the dung of cattle. It was captured likewise (in Lanzarote and Fuerteventura) by M. Hartung

b *Tarsorum intermediorum masculorum ant penultimus subtus  
haud setoso-pennicillatus*

### 313 *Ootoma fuscipennis*

*O fusco-castanea, nitida, subtus (abdomine excepto) necnon supra ad  
margines longe subflavescenti-pilosa, capite densissime punctato,*

\* He ignores the very few distinctive features which these exceedingly variable insects possess,—referring *almost solely*, in his four “diagnoses,” to the characters which they have in *common*. Take, for instance, his “description” of the *M fuscipennis*. “Moindre d’un tiers que le *bipartita* [this is incorrect], cet insecte se distingue par la couleur obscure de ses élytres qui sont presque noirs, tandis que tout le reste du corps est châtain. [This is equally inaccurate, in *rare cases* the head and prothorax are slightly more rufescent than the elytra, but the insect is usually *perfectly concolorous*] Ce petit hanneton a le dessous du corps tres-velu excepte le bout de l’abdomen [which is the case with them *all*], et de longs poils se montrent en outre aux bords antérieur et postérieur de son corselet, de manière a cacher presque entièrement l’écusson [a *generic* feature which, although exceedingly variable, is applicable alike to the *whole* of the species]. La ponctuation du dessus du corps et la disposition des stries et des côtes sur les élytres sont analogues a ce que l’on remarque dans le *M bipartita*, et la forme du chaperon est a peu pres la même.” In which entire description there is not so much as one single statement which is even *approximately* diagnostic

clypeo recurvo ad latera ampliato, a fronte lineâ obsoletissimâ diviso, prothorace brevi, vix dense punctato, elytris parcius subrugoso-punctatis, singulis striâ suturali lineisque tribus obsoletissimis instructis, pedibus rufo-piceis, tarsis clarioribus, palpis antennisque rufo-testaceis, clavâ pallidiore

*Mas* plerumque minor, pygidio propygidioque subtilius punctatis, antennarum clavâ elongatâ, palporum maxillarium articulo ultimo latissimo obovato-ovali

*Fcem* plerumque major, pygidio propygidioque profundius punctatis, antennarum clavâ breviori, palporum maxillarium articulo ultimo subovali (in medio paulo latiore) — Long corp lin 6-8

*Melolontha fuscipennis*, *Brulle*, in *Webb et Berth (Col)* 61 pl 1 f 1 (1838)

*Ootoma fuscipennis*, *Blanch*, *Cat Col Mus de Paris*, 120 (1850)

*Habitat* Fuerteventuram et Teneriffam, in usdem locis ac præcedens degens

As may be gathered from what has been said, the dull, brownish-castaneous, more or less concolorous hue of this insect (in which, however, *occasionally* the prothorax and *occasionally* the elytra are somewhat more rufescent than the rest of the surface), combined with its just perceptibly less densely punctured pronotum, and the enormously developed last joint of the maxillary palpi of its males, whilst that even of its females is slightly wider (and *less cylindric*) than is the case in the corresponding sex of the *bipartita*, will serve to distinguish it from that species. I have taken it, from out of burrows in the soil beneath camels' dung, in the Rio Palmas of Fuerteventura, as also, though more sparingly, in Teneriffe and I captured two *dead* specimens in Palma which are in all probability referable to this species, but they were in such a mutilated condition (having been extracted from a cobweb) that I cannot state this for certain

§ II *Scutellum parce punctatum, sed lineis duabus obliquis  
vix impressum*

314 *Ootoma integra*, n sp

*O fusco-castanea*, nitida, subtus (abdomine excepto) neonon supra ad margines subfulvescenti-pilosa, capite densissime et profunde punctato, clypeo recurvo ad latera ampliato, a fronte lineâ obsoletâ diviso, prothorace valde profunde rugoso-punctato, scutello postice rotundato-obtuso, ad basin ipsam punctis perpauca (et vix lineis duabus brevissimis rudimentariis) notato, elytris paulo rufescentioribus parciusque rugoso-punctatis, singulis striâ suturali obsoletâ lineisque tribus obsoletissimis instructis, pedibus rufo-piceis, tarsis clarioribus, tibus anticis extus fere integris (et dentibus obsoletis), palpis antennisque rufo-testaceis, clava pallidiore

*Mas* adhuc latet

*Fœm* palporum maxillarum articulo ultimo subcylindrico-ovali —  
Long corp ln  $6\frac{1}{2}$

*Habitat* Canariam Grandem, in regione "El Monte" dictâ capta

In its scutellum having only three or four scattered punctures at its extreme base and the merest rudiments of two very abbreviated obliquely impressed lines behind, the *O integra* is somewhat intermediate between the last Section and the present one, and did it not possess one or two decided structural peculiarities of its own, I should have been unwilling to erect an additional species from the evidence afforded by a single specimen, in such a variable group. But since it has really a few very remarkable characters, which I have no reason to regard as accidental, and since its *habitat*-island, moreover, is different from that of any of the remainder, I have been almost compelled to treat it as distinct.

The *O integra* differs from the last species and the following one in the above-mentioned sculpture of its *posteriorly* rounder (or more obtuse) scutellum, in its more deeply punctured surface, in the last joint of the maxillary palpi of its females being more strictly oblong, and blunter at the tip (the corresponding articulation in the *O castanea* being regularly acuminate, or conical), and in its two front tibiæ having their outer edge almost entire—the teeth being nearly obsolete. Its elytra are not quite so rufescent as those of the *O bipartita*, and its head, prothorax, and scutellum are much less dark—being, in fact, scarcely obscurer than the elytra. The unique example from which the above diagnosis has been compiled was captured by myself, during the spring of 1858, in the region of El Monte in Grand Canary.

### 315 *Ootoma castanea*

*O* fere ut *O fuscipennis*, sed corpore subtus sæpius pallidiore, clypeo vix brevior, a fronte lineâ rectâ distinctiore diviso, antice paulo magis sinuato, ad latera minus amphato-recurvo (ergo mox ante oculos minus angulato-exstante) prothorace paulo densius punctato, per basin ipsissimam minus evidenter marginato, elytris striâ suturali plerumque levius impressa, tibus anticis vix obsoletius dentatis.

*Mas* palporum maxillarum articulo ultimo magno lato sed minore et brevior quam in *O fuscipenni* necnon magis regulariter ovali.

*Fœm* palporum maxillarum articulo ultimo regulariter conico (quare apicem versus magis acuminato quam in *O fuscipenni*).

*Variat* colore a pallido-castaneo usque ad fusco-piceo — Long corp ln  $4\frac{1}{2}$ – $6\frac{1}{2}$

*Melolontha castanea*, Brulle, in Webb et Berth (Col) 60 (1838)

*Dasyteina canariensis*?, Rambur, *Ann de la Soc Ent de France*, 331 (1843)

*Ootoma castanea*, Blanch, *Cat Col Mus de Paris*, 120 (1850)

*Habitat* Teneriffam, rarissime, in cuniculis fodiens

The present *Ootoma* (which seems, so far as observed hitherto, to be peculiar to Teneriffe) might be almost regarded at first sight as a mere insular modification of the *O fuscipennis*, nevertheless, since the sexual proportions of its palpi are different, I am bound to regard its *other* small distinctions as of greater importance than I should have been inclined to have done had there been no *structural* character to warrant its separation. Judging from the few examples which I have seen, it is, on the average, a little smaller than that insect, its colour is more variable (being sometimes of a pale reddish-chestnut, and at others of a dark piceous-brown), its body beneath is nearly always of a more pallid hue than is the case in that species (being often yellowish-testaceous), its clypeus is relatively a trifle shorter, more sinuated in front, less recurved and developed at the sides (and therefore less *laterally-prominent* immediately in front of either eye), and more evidently divided from the forehead by a straight transverse line, its prothorax is just perceptibly more densely punctured, and less coarsely margined along its extreme basal edge, its elytra have their sutural stria *usually* less deep, its scutellum is beset with a few rather large punctures, but apparently *not* impressed with two oblique lines, and its anterior tibiæ have their external teeth perhaps somewhat less developed. In addition to which, the terminal joint of its maxillary palpi is relatively smaller in both sexes,—being, also, more regularly oval in the males and much more acuminate (or conical) in the females.

The only two of the above diagnostic features which M. Brullé has mentioned are, the fact of its abdomen being pale and of its clypeus being separated from the forehead by a transverse line, nevertheless the latter of these is, after all, only a *relative* difference, the suture being merely a little more evident in the *O castanea* than in the other species, whereas his description would certainly lead to the supposition that it was *only* traceable in the present one. However, I think there is sufficient to conclude (even from such meagre evidence) that the *Teneriffan* insect is the one which he referred to (described from a single individual, without anterior feet, palpi, and antennæ') under the trivial name of *castanea*.\*

\* Scarcely more intelligible is Rambur's description of his *Dasyteina canariensis*, nearly all the characters which he gives being merely such as are common to the *Ootomas generally*. Nevertheless since he alludes to the species as *innata*

I have taken the *O castanea* near Orotava, and it has likewise been communicated by the Barão do Castello de Paiva from the vicinity of Laguna

### 316 *Ootoma obscurella*, n. sp.

*O* fere ut *O castanea*, sed ubique (subtus et supra) fusco-nigra, pube obscuriore, suturâ frontali vix minus distinctâ, scutello paulo densius punctato, pedibus piceis, tarsis clarioribus, palpis antennisque rufo-testaceis

*Mas* palporum maxillarium articulo ultimo magno, lato et paulo longiore quam in *O castaneâ*

*Fem* palporum maxillarium articulo ultimo subcylindrico-ovali (multo minus conico quam in *O castaneâ*)—Long corp lin 5-6

*Habitat* in Hierro, mense Februario a d 1858 duo specimina collegi

Were it not for the slight differences in the shape of the ultimate joint of their respective maxillary palpi, I might perhaps have regarded the present *Ootoma* as a dark insular modification of the *castanea*, peculiar to Hierro, but as I cannot suppose that those organs would vary structurally in the same species, I am compelled to treat the *O obscurella* as an additional member of this small geographical assemblage. It may be known from the *castanea* by its uniformly dark hue (both the under and upper surfaces being of a brownish-black), by its obscurer pubescence, by its frontal suture being a little less distinct, by its scutellum being apparently somewhat more thickly punctured, and by the terminal articulation of its maxillary palpi being (relatively) a trifle longer in the males and much less conical (or more oblong) in the females

Judging from its colour alone, I should have had no hesitation in referring this insect to the *Melolontha obscura* of Brullé, but since he mentions that that species has the last joint of its *male* maxillary palpi only very slightly wider than the preceding one (and the enlarged antennal clava to which he alludes would seem to imply that it *cannot* have been a female from which he drew up his diagnosis), I am precluded altogether from acting on that supposition. The only two examples which I have seen were taken by myself, in the island of Hierro, during February 1858

### 317 *Ootoma obscura*

*Melolontha obscura*, Brulle, in *Webb et Berth (Col)* 61 pl 1 f 2 (1838)

*Ootoma obscura*, Blanch, *Cat Col Mus de Paris*, 120 (1850)

*Habitat*?

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dilatior,                    tibis anticis obsolete trifidis," and cites it as coming from "l'île de Ténériffe." I think we may safely assign it to the *O castanea* (for it is manifestly, as Lacordaire has rightly conjectured, an *Ootoma*)

Although I cannot say whether it belongs to the present Section or the preceding one, I nevertheless admit this species into the Catalogue, —feeling sure (from the reasons already stated, and assuming M Brullé's description to be correct) that it cannot be referred to any of the preceding members of the genus, though in its darkened hue it would appear to agree with the *O. obscurilla*. The enlarged *spatula-form* clava of its antennæ, moreover, which it is stated to possess, would still further tend to distinguish it. All the other particulars to which M Brullé calls attention are merely generic ones, existing equally in *all* the representatives of the group hitherto detected. As to the island in which it was found I am, of course, unable to conjecture,—M Brullé, as though to make his Catalogue (if possible) even still more inaccurate and incomprehensible, having entirely omitted all reference to "*habitat*" throughout the whole of it.

## Fam. 28. DYNASTIDÆ.

### Genus 132 PHYLLOGNATHUS.

Eschscholtz, *Bull. de Moscou*, 65 (1830)

#### 318 *Phyllognathus* Silenus

*Scarabæus* Silenus, *Fab., Syst. Ent.* 1: 13 (1775)

— —, *Brullé, in Webb et Berth. (Col.)* 60 (1838)

*Phyllognathus* Silenus, *Muls., Lamell. de France*, 379 (1842)

— —, *Lucas, Col. de l'Algérie*, 273 (1849)

*Oryctes* Silenus, *Hartung, Geolog. Verh. Lanz und Fuert* 141

*Habitat* Lanzarotam, Fuerteventuram et Teneriffam, præsertim sub rejectamentis stabulorum necnon sub stercore bovino, equino, camellino fodiens

The excessive variability of the *males* of this insect, both in size and in the development of the frontal horn, which is often so reduced in dimensions as to be almost obsolete (under which circumstances the sublateral cavities of the prothorax, and the wider central one, are comparatively evanescent), renders *ex tunc* specimens of that sex sometimes liable to be confounded, at first sight, with the females, nevertheless the inequality of the claws of the anterior feet will serve immediately, in every instance, to distinguish the males. It is eminently a species of Mediterranean latitudes, occurring in the south of Europe and the north of Africa\*, and the only differences, at all constant, that I can detect in the Canarian examples are, that their

\* I have captured it at Mogadore, on the opposite coast of Morocco, and it is recorded by M Lucas in Algeria

clypeus is somewhat more pointed, and less recurved, at the apex, and, together with the basal portion of the frontal process, more rugosely sculptured, whilst the *genæ* (or the lateral rim of the head which projects over either eye) are not quite so prominent, and the prothorax of its *female* sex is rather less *regularly* rounded at the sides (or more obliquely truncated anteriorly) but these are points, I imagine, of but slight importance in an insect so essentially variable.

I have taken the *P Silenus* in Lanzarote and Fuerteventura (in the latter of which islands it was also found by M Hartung), and it has been communicated by the Baião do Castello de Paiva from Teneriffe. The females would appear to be very much scarcer than the males, for out of 16 specimens which I captured in the Rio Palmas of Fuerteventura (from beneath the refuse of a camels' stable) *two only* belong to the former sex. In Lanzarote (and probably in the other islands likewise) it is called "Chamorro" by the inhabitants.

### Genus 133 ORYCTES

Mlliger, *Kaf Preuss* 11 (1798)

#### 319 *Oryctes prolixus*, n sp

*O fere ut O Grypus*, sed paulo minor, prothorace minore, elytris parum longioribus (aut potius abdomine brevior), propygidium vel fere vel omnino tegentibus, subtus densius pilosus, clypeo in rostellum brevius, magis triangulare et plerumque magis recurvum producto, genis antice minus porrectis, postice brevioribus, haud ultra medium oculorum (nigiorum) ductis, prothoracis excavatione (in maribus) latius politissimâ, postice utrinque argutius determinatâ et ibidem impressione parvâ adjunctâ profundiore auctâ, parte mediâ basali minus convexâ necnon antice acutiore haud tridentatâ (sed obsolete trisinuatâ necnon ad apicem, vix bipartitum, paulo magis quam ad angulos laterales porrecta), elytrorum punctis versus seriem subsuturalem majoribus, propygidio (necnon pygidio in sexu masculino) multo magis pubescente grossiusque transversim scrobinato.—Long corp lin 13-15

*Scarabæus nasicornis*, Brulle [nec Linn], in Webb et Berth (Col) 60 (1838)

*Habitat* in Teneriffa, Gomeia et Hierro, rarissimus

The present *Oryctes* belongs to the same Section of the genus as the European *O Grypus*, in which the anterior tibiæ are 3-dentate, the beak-like projection of the clypeus is comparatively small and narrow, and the elytra are furnished along their hinder margin with a narrow fringe of short yellowish hairs. Indeed it is closely allied to that species, though I believe undoubtedly distinct,—displaying a number of small differential characters which I cannot detect in *any*

of the specimens which I possess of the *O Grypus* from Portugal, Spain, and the south of France. Thus, it is rather smaller (its male prothorax being more particularly diminished), and its body beneath, as also its pygidium and propygidium, are more pilose,—the two latter moreover being less developed, so that the elytra cover either the whole or nearly the whole of the propygidium (which also has its minute transverse striae, used for the purpose of stridulating, very much coarser). In other respects, the beak-like process of the clypeus is rather shorter, more triangular, and usually more recurved (though less evidently excavated) at the apex, its *genae* are much less project in front and less produced behind (where they do not extend below the middle of either eye), the large prothoracic excavation of its males is more *widely* polished posteriorly, and has the hinder supplemental depression at either side deeper and better defined, whilst the elevated middle portion at the base is much less convex and has its edge acuter and differently formed—being obscurely trisinate, with the centre minutely and obsoletely bifid and *rather more advanced* than the lateral angles (instead of being obtusely tridentate, with the outer projections greatly developed), and the punctures of its elytra immediately outside the subsutural series are larger\*.

The *O prolaus* appears to be decidedly rare. I took a single specimen of it in Hierro, during February of 1858, and another, at Taganana, in Teneriffe, towards the end of May 1859,—from which latter island a male has lately been communicated by the Barão do Castello de Paiva, and a fourth example was captured by the Rev R. T. Lowe at Hermigua, in Gomera, during April of 1861. So that it probably exists throughout at any rate the central and western portions of the archipelago.

## Fam. 29. CETONIADÆ

### Genus 134 EPICOMETIS

Bumeister, *Handb der Ent* iii 434 (1842)

#### 320 *Epicometis squalida*

*Scarabæus squalidus*, *Lin.*, *Syst Nat* i 2 556 (1767)

*Cetonia cincta*, *Chap.*, *Horæ Ent* 213 (1825)

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\* It will be seen at once that the *greater number* of these characters distinguish it equally from the *O nuscornis* (which has very much in common with the *O Grypus*).

*Cetonia hirta*, *Brulle* [nec *Fab*], in *Webb et Berth* (*Col*) 62 (1838)  
*Tropinota Reyi*, *Muls*, *Lamell de France*, 575 (1842)

*Habitat* insulas omnes Canarienses, ad flores vulgaris

The present insect, which occurs in the south of France, Italy, Sicily, &c, is *universal* in the Canaries—in the whole seven islands of which I have myself captured it, and in some of them very abundantly. It is particularly partial to the flowers of the *Asphodelus fistulosus*, on which it may often be taken in actual clusters,—as I have more especially observed in the region of El Golfo on the western side of Hierro, and on the mountains above S<sup>ta</sup> Cruz of Teneriffe (in the direction of Las Mercedes). Nevertheless it is frequently almost as common on thistles. From Teneriffe it has likewise been communicated by the Barão do Castello de Paiva and Dr. Crotch, the latter of whom found it also in Gomera. Messrs Webb and Berthelot's examples are referred by Blanchard [*Cat Col Mus de Paris*, p. 9] to the *E. hirtella*, L., but all the specimens which I have hitherto seen from these islands belong certainly to the *larger* of the two nearly allied species (in which the outer elytral costa is comparatively well developed and elevated, and obscurely bifurcate at either shoulder), namely the *E. squalida*.

### 321 *Epicometis femorata*.

*Cetonia femorata*, *Illig*, *Mag. für Insekt.* ii. 231 (1803)  
 — *hispanica*, *Gory et Perch*, *Mon. des Cet.* 280 (1833)  
*Epicometis femorata*, *Burm*, *Handb. der Ent.* iii. 435 (1842)  
 — —, *Blanch*, *Cat. Col. Mus. de Paris*, 9 (1850)

*Habitat* Fuerteventuram borealem, in arenosis ad Corralejo capta

The only locality in the whole seven islands in which I have taken this insect (which occurs in Spain and Algeria) is the sandy region at Corralejo, in the extreme north of Fuerteventura,—where, during the spring of 1859, I captured eight specimens of it, burrowing in the loose sand around the roots of the few shrubby plants which stud that arid waste. It is therefore of extreme rarity at the Canaries.

## Fam. 30. BUPRESTIDÆ.

### Genus 135. *ACMÆODERA*

Eschscholtz, *Zool. Atlas*, i. 9 (1823)

### 322 *Acmæodera cisti*.

*A. elongata*, subconvexa, nigra, subtus cinereo-pilosa, capite prothoraceque submetallicis subnitidis profunde et dense punctatis et

pube longiusculâ (præsertim in illo) subrectâ cinereâ fulvâque obsita, hâc leviter canaliculato, elytris flavo multivittatis, profunde striato-punctatis, interstitiis minute uniseriatim punctulatis —Long corp ln 2-3½

*Acmæodera cisti*, Woll., *Ann Nat Hist* (3rd series) ix 439 (1862)

*Habitat* Canariam, Teneriffam et Palmam, præsertim ad flores *Cistus* (sc *monspeliensis* atque *vagantis*) in excelsioribus crescentium

Its very deeply and densely punctured head and prothorax, in conjunction with the exceedingly numerous and more or less confluent yellow *vittæ* of its very coarsely punctate-striated elytra, which seem in a great measure as though formed by broken-up lines, will sufficiently distinguish the present *Acmæodera* from any of the following species\* It appears to occur for the most part in the higher regions of Grand Canary, Teneriffe, and Palma, in the first of which I captured it in the lofty Pinal of Tajarana, above San Bartolomé, during April 1858,—almost exclusively on the flowers of the *Cistus monspeliensis* and *vagans*, whilst in the second I beat it, more sparingly, from off the blossoms of the *Spartium nubigena*, on the Cumbre adjoining the Cañadas (above Ycod el Alto), at an elevation of more than 8000 feet, early in May of 1859, as also, at the beginning of June of the preceding year, from amongst the herbage growing on the perpendicular rocks which bound the great Pinal, above the plains known as “Los Llanos,” in the Banda of Palma In Teneriffe it was found also by Dr Crotch The Palman specimens are, on the average, larger than those from Grand Canary and Teneriffe

### 323 *Acmæodera fracta*, n sp

*A* breviuscula, subdepressa, nigra subtus cinereo-pilosa, capite prothoraceque submetallicis subnitidis ruguloso-punctatis et (unâ cum elytris) pube brevi demissâ albido-cinereâ dense irroratis, hoc subconvexo leviter canaliculato et ad latera maculâ parva obscurâ flavescente ornato, elytris subdepressis, flavo multivittatis, striato-punctatis, interstitiis valde rugosis et minute uniseriatim punctulatis —Long corp ln 1¾-2½

*Habitat* Canariam Grandem, in inferioribus ad El Charco necnon in pineto quodam in montibus excelsis capta

\* In markings and general aspect the *A cisti* is closely allied to a species given me by the Rev Hamlet Clark, and which he captured near Algiers It is, however, not quite so narrow as that insect, its prothorax is more particularly wider, as also proportionally shorter rounder at the sides, regularly punctured (instead of being *rugosely imbricated*), and very much more *even* (being entirely free from the bipartite gibbosity which forms the anterior disc in that species), its elytral *vittæ* are more numerous, its upper surface has the pubescence both considerably longer and very much more erect, and its antennæ are less abbreviated

The present species (which appears to be of the greatest rarity) is very closely related to the *A. cisti*. It is, however, a little smaller, and relatively shorter, as also a trifle wider anteriorly, than that insect, its prothorax is somewhat convexer, rather less deeply (though perhaps a little more roughly) punctured, and (instead of being concolorous) with an obscure testaceous patch behind the middle of either lateral edge, its elytra are flatter, less coarsely punctate-striated, but with the interstices considerably more rugose (being sculptured after the fashion of seal-skin), and its entire upper surface has the pubescence very much shorter, perfectly *decumbent*, and of a pure cinereous-white—being apparently unmixed with the fulvous hairs which are sufficiently conspicuous on the *A. cisti*. The only two specimens which I have seen were captured by myself in Grand Canary, during April 1858,—one of them (in company with the *A. cisti*) in the lofty Pinal of Tarajana, above San Bartolomé, and the other in the low sandy tract at El Charco, in the district of Maspalomas, in the extreme south of the island. It would appear, therefore, to be quite independent of elevation.

### 324 *Acmaeodera plagiata*, n. sp.

*A. subconvexa*, nigra, subtus cinereo-pilosa, capite prothoraceque metallicis nitidis minus dense punctatis et pube longiusculâ (præsertim in illo) suberectâ fulvâ cinereaque obsitis, hoc convexo antice et postice canaliculato, elytris singulis vittis quatuor (sc. basali minutâ, postbasali majore, discali elongatâ undulatâ, et apicali minore) pallide testaceis ornatis, profunde punctato-striatis, interstitiis minutissime uniseriatim punctulatis.—Long corp. lin 2½

*Habitat* Canariam Grandem, in clivo quodam submaritimo inter Maspalomas et Juan Grande d. 12 Apr. A. D. 1858 specimen unicum sub lapide deprehendi.

The convex, very metallic, and rather less densely punctured prothorax of this *Acmaeodera*, which has its central channel interrupted in the middle, combined with its rather long, suberect, and more fulvescent pile and the large and very pale longitudinal patches of its dark elytra (the basal one of which is small, the second larger, the third very large, irregular and elongate, and the fourth, which is nearly connected with it, narrow and subapical) and the excessively minute punctules of their interstices, will sufficiently distinguish it. It is hitherto unique, the only specimen which I have seen having been captured by myself (on the 12th of April 1858), from beneath a stone, on a dry arid slope in the south of Grand Canary—between Maspalomas and Juan Grande.

325 *Acmæodera ornata*, n. sp.

*A. angustula*, convexa, nigra, subtus albido-squamosa, capite prothoraceque cupreo-metallicis nitidis dense sed minus profunde punctatis et (una cum elytris) pube brevissima demissa minutissima cinerea parce irroratis, hinc antice convexo profunde canaliculato, elytris postice acutis, singulis macula minuta basali et altera longiore postmediâ (e lineâ fiacta efformatis) necnon plaga maximâ sinuatâ sublaterali (a basi usque ad apicem ducta) testaceis ornatis, leviter striato-punctatis, interstitiis sat minute punctulatis.—Long. corp. lin. 2

*Habitat* Fuerteventuram, Aprilis mense a. d. 1859 exemplar unicum ad Rio Palmas collegi

The shining, cupreo-metallic, and *comparatively* finely (though densely) punctured prothorax of this species, which has its anterior disc prominent and convex and its longitudinal channel very deep, in conjunction with its narrow and posteriorly rather acute outline, its less coarsely striated elytra (which however have the minute punctules of their interstices rather conspicuous), and the peculiar shape of its pale elytral *vittæ* (the basal and postmedial ones of which are small and narrow as though caused by a broken-up line, whilst the outer, or sublateral, one is large, sinuated, and elongate—reaching from the base to the apex), will readily separate it from the three preceding species\*. The only example which has come beneath my notice I brushed from out of vegetation in the Rio Palmas of Fuerteventura, at the beginning of April 1859

## Genus 136 BUPRESTIS

Linnaeus, *Syst. Nat.* i. n. 659 (1767)

326 *Buprestis Bertheloti*

*B. nitida* submetallico-nigra, fronte (maculis duabus virescentibus exceptis), prothoracis margine antico ipsissimo necnon laterali antice elytrorumque (nigriorum) fascis quatuor obliquis confluentibus (e maculis minutis disjunctis compositis) flavo-ornatis capite prothoraceque profunde punctatis, hinc antice angustato in disco an-

\* The *A. ornata* is a good deal allied to the *discoidea* Fab., from northern Africa, but is rather smaller and narrower with its prothorax less developed, much more shining and metallic, and regularly punctured (instead of being coarsely imbricated) its elytra are more acute behind and with their inner, broken-up line almost obsolete, its limbs are slenderer, and its entire upper surface has the pubescence very much more minute sparing, and depressed. Possibly it may approach nearer to the *A. flavovittata*, Lucas, but judging from the description, the different punctuation of the head of that species, and the broken-up sublateral band of its elytra (which appears to be resolved into four *vittæ* and two spots) would, apart from minor characters, seem to remove it from the *A. ornata*

tico utrinque spatio polito instructo, elytris profunde subcrenato-striatis, interstitiis minute et parce punctulatis, singulis ad apicem excavatis bispinosis, tibiis anticis (in maribus saltem) robustis, leviter incurvis, intus paulo excavatis—Long corp lin 11

*Buprestis Bertheloti*, *Brulle, in Webb et Berth* (Col) pl 2 f 12 (1838)

*Habitat* Teneriffam, mihi non obvia, exemplar unicum a Barone *Castello de Paiva* communicatum solum vidi

Judging from the figure of the *Buprestis Bertheloti* given by M Brullé in Webb and Berthelot's volume (for it is unaccompanied by a *description*—in at all events the portion of the work which I possess), there can be no doubt that the specimen from which I have compiled the above diagnosis is the insect there referred to. This example has lately been communicated by the Barão do Castello de Paiva, who obtained it from Teneriffe in a small (but very old) collection which was formed there by a friend, and I may add that I have found the various localities assigned to the species so exceedingly correct, in every instance, that I have no hesitation in regarding the present *Buprestis* as having been undoubtedly captured in the island. Unfortunately, however, no special *habitat* was assigned to it, though, from subsequent inquiries instituted by the Baron Paiva, the *species* (if not indeed this actual specimen) appears to have been taken in the vicinity of the Agua Garcia\*, and also (on one occasion at any rate) even in the Plaza de San Francisco, of St<sup>a</sup> Cruz, where it was found, on the wing, by a Spaniard. Since, however, it entirely escaped my own observation, I conclude that it is at all events, considering its large size and conspicuous appearance, of the greatest rarity

### Genus 137 ANTHRAXIA

Eschscholtz, *Zool Atlas*, 1 9 (1823)

#### 327 *Anthraxia senilis*, n sp

A parallela, sat nitida, subdepressa, ænescenti-necnon subcuprescenti-nigra, ubique (scutello polito excepto) dense transversim rugosa (haud punctata) et pilis tenuibus longiusculis (præsertim in capite) suberectis cinereis vestita, prothorace latiusculo, trans-

\* With respect to the exact *habitat* of this fine *Buprestis*, the Baron Paiva writes to me as follows: "M S Berthelot m'a répondu *actuellement* à ce sujet les lignes suivantes: 'Le *Buprestis Bertheloti*, dont vous me demandez l'*habitat*, est un beau Coleoptère que j'ai trouvé la première fois à Tenerife, en 1824 ou 1825, aux environs de la Forêt d'Agua Garcia. Il a été rencontré ensuite, dans la même localité, par mon ami Dumont d'Urville, toujours près de l'auge de bois où l'on abreuvait les chevaux, à quelques pas de l'entrée de la Forêt. Cette auge ou abreuvoir se trouve située sur le bord de l'ancienne route qui conduisait alors de Lagune à l'Orotave.'"

verso, grossius rugoso et versus latera reticulato, intra angulos posticos subrectos late impresso, elytris (præcipue ad basin) paulo inæqualibus, suturâ margineque leviter incrassatis, hœ versus apicem minutissime serratulo, antennis pedibusque gracilibus, vix metallicis—Long corp ln  $2\frac{1}{3}$

*Habitat* Canariam Grandem, in pineto quodam in montibus excelsis sito pauca specimina inter flores *Cistorum* volantia mense April ineunte A D 1858 deprehendi

The present *Anthraxa* is a little larger than, and relatively not quite so broad as, the *A. sepulchralis* and *morio* of southern Europe. It is, however, considerably brighter and more metallic, its sculpture is less dense, and on the pronotum reticulate (and very widely so) only towards either side, its prothorax is straighter at the edges, and much more deeply impressed within the posterior angles (which are nearly right angles), its scutellum is unsculptured and highly polished the margins of its elytra behind are minutely serrated, and its entire upper surface is clothed with very much longer, suberect, and whitish-cinereous hairs. The few specimens which I have seen were taken by myself in the lofty Pinal above San Bartolome, in the district of Tarajana, of Grand Canary, at the beginning of April 1858. They were exceedingly active on the wing,—flying, in the hot sunshine, amongst the flowers of the *Cistus monspeliensis* and *vagans*, to which they seemed to be specially attached.

## Fam. 31. THROSCIDÆ.

### Genus 138 THROSCUS

Latreille, *Proc des Caract Gen des Ins* 42 (1796)

#### 328 *Throscus integer*

*Trivagus integer*, Woll, *Cat Mad Col* 82 (1857)

*Habitat* in sylvaticis excelsis Teneriffæ et Palmæ, rarissimus

Although I no longer possess a specimen of the Madeiran *T. integer*, for comparison, I nevertheless refer the few examples of *Throscus* which I have hitherto seen from these islands to that insect, inasmuch as I can detect nothing in my original diagnosis to warrant the suspicion that the two species are distinct. Perhaps the elytral interstices may be a little more evidently punctulated in the Canarian one, but the eyes are totally ungrooved, as in the *T. integer*,—though with the faintest possible tendency to be truncated-off (scarcely sub-emarginated) at that particular point of their anterior edge (close to

the insertion of the antennæ) where in certain other species the oblique groove commences. But this (which indeed is scarcely perceptible, even beneath the microscope) may be equally the case in the Madeiran type. I have taken it sparingly, out of damp rotten sticks, in the laurel-regions between Taganana and Point Anaga, of Teneriffe, as also, in similar situations, on the ascent to the Cumbre, above Buenavista, of Palma.

## Fam. 32. ELATERIDÆ.

### Genus 139 COPTOSTETHUS

Wollaston, *Ins Mad* 238 tab iv f 8 (1854)

#### 329 *Coptostethus brunneipennis*.

*C. elongatus*, niger vel fusco-niger elytris plus minus brunneis, fulvo-pubescentibus, prothorace elongato, basi paulo angustato, elytris pube suberectâ tenui vestitis, sat profunde crenato-striatis, interstitiis subconvexis, antennis pedibusque elongatis, testaceis.

*Variat* prothorace ad latera elytrisque ad humeros plus minus conspicue pallidioribus, necnon etiam (immaturus) colore omnino ferrugineo.

*Var. β obscurus* [an species?] Prothorace elytrisque obscurioribus concoloribus, illo ad basin angustiore, pedibus (sed præsertim tarsis) vix brevioribus — Long corp.  $ln\ 2\frac{2}{3}$ — $3\frac{1}{2}$

*Coptostethus brunneipennis*, *Woll., Ann Nat Hist* xi 218 (1863)

*Habitat* in Teneriffa, Palma et Hierro, sub lapidibus, passim

The excessive variability of this insect makes it a very difficult one to define, for, after carefully studying many specimens, collected in various islands and altitudes, it appears to me that nearly the whole of its characters are inconstant. Its colour is eminently so, and even the relative length of its tarsi seems to be unstable, but as the latter are always a trifle longer in the males than in the females, this may occasionally perhaps be more apparent than real. Upon the whole, however, it is more elongate than the other *Coptostethi* here enumerated, and also larger than any of them, except perhaps the *C. obtusus*, its elytra are generally of a browner tint, and even its prothorax (which is less abbreviated and convex, and not quite so narrowed behind, as is the case in the *C. canariensis* and *globulicollis*) is often more or less diluted in hue. In its comparatively elongated limbs it agrees with the *C. gracilis*. It occurs principally at intermediate elevations, though sparingly in lower ones also. Thus, it was taken both by Mr Gray and myself close to the Puerto Orotava in Tene-

riffe, and I subsequently captured it at the Agua Garcia, on the mountains above S<sup>ta</sup> Cruz, and at Las Mercedes and Taganana, in the same island, as also in the Barranco de Galga of Palma, and near Valverde in Hierro. But it is decidedly everywhere scarce. The *var*  $\beta$  was found in the district of El Golfo, on the western side of Hierro.

### 330 *Coptostethus gracilis*, n. sp.

*C. angusto-elongatus*, fusco-niger elytris plus minus brunneis fulvo-pubescentibus, prothorace elongato basi angustato, elytris pube suberectâ tenuissimâ vestitis, sat profunde crenato-striatis, interstitiis subconvexis, antennis pedibusque elongatis pallide testaceis, tarsis præsertim elongatis gracilibus.

*Var*  $\beta$  Elytris ad humeros paulo rufescentioribus — Long corp. ln  $1\frac{3}{4}$ – $2\frac{1}{2}$

*Habitat* in montibus excelsis Teneriffæ, usque ad 8000 vel 9000' s. m. ascendens.

Whether this be anything more than a small and narrow state of the *C. brunneipennis*, peculiar to the higher regions of Teneriffe, I will not undertake to pronounce. Judging, however, from the six individuals now before me, it is not only smaller and narrower than that insect, but is perhaps of a somewhat browner hue, its prothorax is a little more drawn-in at the base, and its legs (particularly the tarsi) are relatively rather longer still, it is likewise a trifle more opaque, and in all the specimens except one (which was found at a lower altitude) the shoulders are concolorous with the rest of the surface. Three of my examples were captured, from beneath stones, in the lofty district adjoining the Cañadas, above Ycod el Alto (at an elevation of more than 5000 feet), during May 1859, and two a few weeks later in similar situations, on the opposite Cumbre, above the Agua Mansa, whilst the remaining one (*var*  $\beta$ ) was taken at the Agua Mansa itself.

### 331 *Coptostethus canariensis*

*C. nitidiusculus*, niger elytris vel vix vel distincte fusciscentioribus, subcinereo-pubescentibus, prothorace convexo, basi angustato, antice lato prosterno antice subhorizontali, elytris convexis, pube brevi subdemissâ tenui parce vestitis, ad humeros oblique truncatis, leviter crenato-striatis, interstitiis subdepressis, antennis pedibusque gracilibus, pallido-testaceis.

*Var*  $\alpha$  elytris ad humeros plus minus obscure dilutioribus necnon (immaturus) colore omnino ferrugineo — Long corp. ln 2–vix  $2\frac{1}{2}$

*Coptostethus canariensis*, Woll., *Ann. Nat. Hist.* ii 196 (1858)

— —, *Candèze Mon. des Elat.* iii 105 (1860)

*Habitat* sub lapidibus in inferioribus Teneriffæ, hinc inde haud infrequens

In their general outline and size, as well as in their comparatively globose prothoraces (which are very convex anteriorly and much narrowed behind) and in their elytra being more truncated obliquely at either shoulder, the present *Coptostethus* and the following one have a good deal in common. The *C. canariensis* however is, on the average, browner (or less dark), as also a little more shining, than the *globulicollis*, its elytra are more finely crenate-striated, with their interstices flatter, and their pubescence perhaps somewhat shorter and less dense, its antennæ, palpi, and legs are always paler (being invariably pale-testaceous), and its prosternum is horizontal anteriorly, instead of being bent downwards just behind the mouth. The *C. canariensis* appears to occur in the lower altitudes of Teneriffe—where it is not uncommon, beneath stones, around the Puerto Orotava, from the sea-level up to the elevation of about 800 feet. And although it may very likely exist in spots of a rather higher altitude, it evidently does not ascend into the regions of the *C. globulicollis*.

### 332 *Coptostethus globulicollis*

*C. niger* elytris rarius dilutionibus, subcinereo-pubescentibus, prothorace convexo, basi angustato, antice lato, prosterno antice deflexo, elytris convexis, pube subdemissâ tenui vestitis, ad humeros oblique truncatis, sat profunde crenato-striatis, interstitiis subconvexis, antennis pedibusque subgracilibus, infuscato-testaceis, illis interdum etiam subnigrescentibus

*Varia*t elytris vel concoloribus vel versus humeros plus minus distincte rufescentioribus.—Long corp. lin  $1\frac{2}{3}$ – $2\frac{1}{2}$

*Coptostethus globulicollis*, Woll., *Ann. Nat. Hist.* (3rd series) ix. 440 (1862)

*Habitat* sub lapidibus in montibus excelsis Teneriffæ, a 3500' usque ad 8000 vel 9000' s. m. ascendens

Whilst the *C. canariensis* occurs in the lower elevations of Teneriffe, the *globulicollis*, on the other hand, would appear to be confined to the higher ones of the same island,—attaining its maximum on the lofty Cumbres, at an altitude of from about 8000 to 9000 feet above the sea. It may be known from its ally by being, on the average, darker and a little less shining (being often quite black throughout, except the limbs), by its elytra being more deeply crenate-striated, with their interstices more convex and their pubescence perhaps somewhat denser, by the front portion of its prosternum (which covers the mouth) being more evidently bent downwards, and by its

antennæ, palpi, and legs being always more or less infuscated—the two former being occasionally much darkened. I have taken it, rather abundantly, from beneath stones, during the spring, both on the lofty Cumbre (adjoining the Cañadas) above Ycod el Alto, and likewise on the *opposite* one (separated from the other by the great interval which constitutes the valley of Orotava) above the Agua Mansa, and I have also captured it, though more sparingly, at the Agua Mansa itself. This last locality represents the lowest altitude (about 3500 feet) at which I have hitherto observed it. Dr Crotch likewise met with it on the Cumbre above Ycod.

### 333 *Coptostethus obtusus*, n. sp.

*C. niger* elytris vix dilutioribus, subfulvescenti-pubescentibus, prothorace longiusculo, basi vix angustato, lateribus subrectis, elytris pube longiuscula subrectâ tenui dense vestitis versus humeros paulo rufescentioribus, valde profunde crenato-striatis, interstitiis convexis, antennis pedibusque longiusculis, testaceis, tibus posterioribus ad basin ipsissimam nigrescentibus.—Long corp. lin.  $3\frac{1}{2}$ .

*Habitat* Teneriffam sylvaticam, ad Agua Mansa sub lapide semel lectus.

Although unwilling to establish an additional species amongst these variable *Coptostethi* from the evidence afforded by a single example, I am nevertheless compelled to do so, since the insect from which the above diagnosis has been compiled differs so essentially from all the others here enumerated that I cannot possibly refer it to any of them. In its general colour, however, and deeply striated elytra (with their convex interstices) it has perhaps a greater affinity with the *C. globulicollis* than with any of the remainder, but its comparatively enormous bulk and longer, more erect, and denser pubescence, combined with its more elongate limbs and totally different prothorax, which is scarcely narrower behind than in front will readily separate it from that species. The unique specimen was captured, during May 1859, in the sylvan region of the Agua Mansa, in Teneriffe.

### 334 *Coptostethus crassiusculus*, n. sp.

*C. nitidiusculus*, subobtusius, niger elytris vix dilutioribus, subfulvescenti-pubescentibus, prothorace convexo, basi vix angustato, elytris basi minus contractis, pube longiusculâ subrectâ tenui dense vestitis, leviter crenato-striatis, interstitiis depressis, antennis pedibusque pallide testaceis.

*Variat* elytris vel concoloribus vel ad humeros læte rufescentioribus, neonem (immaturus) colore omnino ferrugineo.

*Variat*  $\beta$  Prothorace elytrisque ad basin paulo magis (singulatim) con-

tractis, horum strus paulo profundioribus interstitusque minus depressis —Long corp lin 2-3

*Habitat* Canariam Grandem, in locis intermediis et editioribus sub lapidibus parce captus

Like the *C brunnicapennis*, the present *Coptostethus* is exceedingly variable in all its characters. It is the only one that I have taken hitherto in Grand Canary, and, in its normal state at all events, it may be known from all other species here described by its rather obtuse, thickened, and more pilose body, by its prothorax and elytra being, each of them, less contracted at their respective bases, and by the latter being but very finely crenate-striated, with their interstices depressed, and with their pile denser and more erect. Its elytra are extremely inconstant in hue being sometimes quite dark and concolorous, and at others more brightly rufescent towards the shoulders than is the case in any of the preceding species—under which circumstances the reddish dash frequently extends backwards more than half-way to the apex.

The *C muscivorus* seems to be peculiar to Grand Canary. I have taken what I regard as the normal phasis of it in the region of El Monte, but the form in which the prothorax and elytra are a trifle less pubescent and somewhat narrower at their respective bases, with the striæ of the latter a little deeper and the interstices more convex, appears to occur at a higher elevation—for I have captured it both on the mountains above San Mateo and in the lofty Pinal of the district of Tarajana, above San Bartolomé.

### Fam. 33. CYPHONIDÆ.

#### Genus 140 CYPHON

Pavul. *Fna Suec* ii 117 (1798)

#### 335 *Cyphon gracilicornis*, n. sp.

*C* oblongus, dense griseo-pubescent, fusco-testaceus capite prothoraceque nitidis, subtilissime punctulatis elytris paulo fuscationibus et minus nitidis, densissime profundiusque punctulatis (nec striatis, nec costatis) antennis gracilibus, nigrescentibus, versus basin pedibusque testaceis.

*Variet* immaturus, colore omnino testaceo —Long corp lin 1-1½

*Habitat* Canariam, Teneriffam et Gomeram, in sylvaticis et subsylvaticis humilisculis haud infrequens.

In size, oblong outline and infuscated hue the present *Cyphon* is very similar to the common European *C coarctatus* from which it

seems mainly to differ in its elytra being a little more densely and evidently punctulated, and free (as in the *C variabilis*) from the obscure longitudinal costæ which are always traceable (though occasionally indistinct) in that species. Its antennæ, also, are perhaps a trifle slenderer. I am very doubtful, however, whether it is more than a geographical phasis of that insect. It is far from uncommon in damp sylvan (and subsylvan) spots of the intermediate altitudes of Grand Canary and Teneriffe. In the former I have taken it throughout the region of El Monte, and elsewhere, and in the latter, at Taganana, Las Mercedes, the Agua Garcia, &c. And I have examined specimens which were found by Dr Crotch in Gomera.

#### Genus 141 **EUCINETUS**

Schuppel, in *Germ Mag* iii 255 (1818)

#### 336 **Eucinetus ovum**

*Eucinetus ovum*, *Woll, Ins Mad* 242 (1854)

—— —, *Id, Cat Mad Col* 85 (1857)

*Habitat* in excelsis sylvaticis Teneriffæ, rarissimus

A single specimen only of this very distinct *Eucinetus* (the differential characters of which, as compared with those of the European *E hæmorrhoidalis* are fully pointed out in my 'Ins Mad') has hitherto come beneath my observation in these islands. It was taken by myself on the wooded mountains above Point Anaga, in the north-eastern extremity of Teneriffe, during May 1859. In Madeira it is not uncommon in certain spots, though exceedingly local.

### Fam. 34. **DRILIDÆ.**

#### Genus 142 **MALACOGASTER**

Bassi, *Mag de Zool (Ins)* pl 99 (1832)

#### 337 **Malacogaster talloides**, n sp

*M angustulus*, niger, nitidus, pilis longissimis erectis fulvis obsitus, capite prothoraceque rufis (hæc interdum postice, sed haud inter antennis, obscuriore), hæc leviter sed illo vix punctulatis, elytris postice valde rugulosis, antice paulo lævioribus, antennis pallide rufo-fuscis, pedibus rufo-testaceis, femoribus (apicibus exceptis) obscurioribus — Long corp lin  $2\frac{1}{2}$  — vix 3

*Habitat* Fuerteventuram, rarissimus, mense Aprilis ineunte a d 1859 specimina septem inter *Arundines* ad Rio Palmas deprehendi

The present insect differs from the European *M Pissuræ* (of

which I possess two Sicilian specimens) in being a little smaller, narrower, and more shining,—its entire surface (which is studded with longer, more erect, and paler hairs) being less sculptured. Indeed its prothorax (which is more cylindric, being much less widened, or margined, at the hinder angles) is almost free from punctures, whilst its elytra are less densely (though perhaps even more roughly) rugulose. Its head is usually, like the prothorax, of a light red (being rarely somewhat darkened behind), its antennæ (instead of being black) are of a pale rufous-brown, and its tibiæ and tarsi are more brightly testaceous. It is of the greatest rarity,—the only specimens which I have seen (seven in number) having been captured by myself, in the Rio Palmas of Fuerteventura at the beginning of April 1859, by brushing the *Aruno donax* in swampy spots alongside the stream. I believe that they are all of them males.

### Fam. 35. TELEPHORIDÆ.

As the members of the present and following two families (*Malachidæ* and *Melyridæ*) formed the subjects of a lengthened Paper “on the Canarian Malacoderms” published by myself in the first volume of the ‘Journ. of Ent.’ in 1862, I must refer to that memoir for the actual descriptions of the several species. Nevertheless, since (as in the analogous case of the *Culathidæ*) the diagnostic, and other, *observations* which it will be desirable here to add can scarcely be compressed into less space than that which I there devoted to them, I shall in the present re-enumeration extract such of them, *verbatim*, as appear necessary to impart the information required. Two additions, however, and some fresh *localities* the result of Dr Crotch’s late researches in the islands, will render occasional alterations necessary.

#### Genus 143. **MALTHINUS.**

Latreille *Gen. Crust. et Ins.* 1: 261 (1806)

#### 335. *Malthinus mutabilis*

*Malthinus mutabilis*, Woll., *Journ. of Ent.* 1: 424 (1862)

*Habitat* insulas omnes Canarienses, ad flores, frequens

The present *Malthinus* may be regarded as the representative in these islands of the European *M. flaveolus*. It is, however, on the average considerably smaller than that insect (descending to a comparatively minute size); its limbs and elytra are relatively shorter, its head although greatly narrowed is not quite so attenuated pos-

teriorly, and has its darker portion more often resolved into separate patches, its prothorax has merely the disc ornamented with two longitudinal lines (which are sometimes broken up into detached spots, and at others completely confluent), its elytra have even their *basal* region usually of a rather clearer yellow, and its legs are less uniformly pale, the hinder pair (and often the intermediate ones also) having the apex of their femora black, and frequently their tibiæ and tarsi a good deal infuscated. It is a most variable species, both in size and hue, and in some of the smaller examples, particularly certain ones of those from the more barren islands of Lanzarote and Fuerteventura, the femora, especially the posterior pair, are clouded towards their *base* (leaving only the apex paler), and their palpi have the terminal joint more decidedly blackened, but after comparing them with an extensive series collected in the seven islands of the Group, I have come to the conclusion that they cannot be detached from the remainder,—their slight differences seeming to be the mere result of depauperation, in those individuals in which the stature is diminished. Nevertheless I have thought it desirable to treat them as a variety—the “var  $\beta$  *depauperatus*”

The *M mutabilis* is universal throughout the archipelago, in the whole seven islands of which, except Gomera, I have myself captured it, whilst in Gomera it was found, during the spring of 1862, by Dr Crotch. In Teneriffe, Palma, and Hierro it was taken also by Mr Gray.

### 339 *Malthinus croceicollis*

*Malthinus croceicollis*, *Woll*, *loc cit* 426 (1862)

*Habitat* Canariam Grandem, ad flores in regione “El Monte” captus

In general colour and aspect this species a good deal resembles the European *sanguinolentus*, nevertheless, by the construction of its anteriorly widened and posteriorly contracted head, it is a true *Malthinus*, and no *Malthodes*. Apart from which, it is considerably smaller than that insect, its forehead and the extreme apex of its elytra are more broadly flavescent, and its limbs are shorter, darker and less robust. Hitherto I have observed it only in Grand Canary, where it is not uncommon, on flowers, during the spring months, throughout the region of El Monte

## Fam. 36. MALACHIIDÆ.

Genus 144 *PECTEROPUS*

*Wollastor*, *Ins Mad* 247 (1854)

340 *Pecteropus angustifrons*.

*Pecteropus angustifrons*, *Woll*, *loc cit* 427 pl xx f 1 (1862)

*Habitat* Gomeram, in collibus mox supra Sanctum Sebastianum mense Februarii A D 1858 ad flores deprehensus

Apart from its *structural* characters (of narrower and more rostrated head, &c), the present insect is *primâ facie* remarkable amongst the *Attali*, to which it necessarily bears a general resemblance, by its brightly rufous prothorax and dark-cyaneous elytra and head (the latter of which is subopaque, and most densely and minutely roughened) Its four anterior legs, also, are more or less rufo-testaceous, whilst the two hinder ones are nearly black The second joint of the front feet of its males is so very slightly produced into a hood-like lobe on the upper side, that the latter is scarcely perceptible except beneath the microscope, but when thus viewed it will be seen, nevertheless, to be *more* strongly pectinated than is usually the case in the true *Attali* Hitherto it has been observed only in Gomera, where, during February 1858, it was taken by Mr Gray and myself from off flowers on the ridge immediately to the north of San Sebastian

341 *Pecteropus scitulus*, n sp

*P viridi-ænescenti-niger* prothorace vel ad latera vel ad angulos posticos rufo-testaceo, parce et minute cinereo-pubescent, nitidus, ubique minutissime et parce punctulatus, capite angusto, ovali, fronte depressâ, oculis minus prominentibus, clypeo pallido, elytris minute subrugulosis, pilis erectis longiusculis (præsertim postice) obstitis, antennis brevibus, ad basin rufo-testaceis

*Variat* pedibus vel concoloribus, vel anterioribus (rarius posticis) plus minus pallidis —Long corp lin 2

*Habitat* Gomeram, a cl W D Crotch tempore vernali A D 1862 captus

In its general colouring (which is greenish-brassy, with only the clypeus, either the sides or merely the hinder angles of the prothorax, and occasionally the anterior legs pale) this insect is almost coincident with the *Attalus ovatipennis*, nevertheless it is considerably larger and has its legs more elongate, and, moreover, its somewhat narrow, oval head and depressed forehead, in conjunction with its but slightly prominent eyes and its short antennæ, would all tend, I think, to refer it to the *Pecteropus*-group rather than to *Attalus* proper It was detected by Dr Crotch in Gomera, during the spring of 1862

Genus 145 **ATTALUS.**

Enichson, *Entomograph* 89 (1840)

§ I *Prothorax* plus minus (1 e vel omnino, vel in parte majore, vel versus angulos solos postuos) *pallidus*

### 342 *Attalus ruficollis*

*Attalus ruficollis*, Woll, *loc cit* 428 (1862)

*Habitat* Teneriffam, ad flores vulgares, ab orâ maritimâ usque ad 8000' s m ascendit. In Palma est minor, depauperatus, tibus tarsisque plus minus testaceis, varietatem (= "var  $\beta$  pauperculus," mihi) efficiens

The present *Attalus* and the following one are the universal species of Teneriffe, abounding on flowers from the sea-level to an elevation of at least 8000 feet. The *A. ruficollis* may be known by its bright-red prothorax, which is usually quite immaculate. The specimens from the higher altitudes are generally a little more densely punctured and ænescent, and have their minute *under-pile* (of short, decumbent, subcinereous hairs) more evidently developed, but they merge gradually into the others as we descend into the lower districts. The "var  $\beta$ " appears to be only a small state peculiar to Palma, in which the tibiæ and tarsi and the base of the antennæ have a tendency to be testaceous. I captured it high up in the Barranco da Agua, as also in the Barranco de Galga, and (in a state approaching nearer to the Teneriffan one) at the Banda. In Teneriffe it seems to occur universally, and it has also been taken in that island by Mr Gray, Dr Clotch, and the Baião do Castello de Paiva.

### 343 *Attalus pellucidus*.

*Pecteropus pellucidus*, Woll, *Ins. Mad.* 247 (note) (1854)

*Attalus pellucidus*, *Id.*, *loc cit* 429 (1862)

*Habitat* Teneriffam, vulgaris, in eisdem locis ac præcedens

The only important character which separates the present *Attalus* from the preceding one is, that its prothorax, instead of being bright-red, is (like the rest of the surface) black, with merely a small portion at either posterior angle (and sometimes the basal margin itself, though very narrowly) of a somewhat pellucid yellow. I can detect no other differential feature (except that the surface is *usually* a trifle more ænescent), and I might therefore have been inclined perhaps to regard it as a variety of the other, had I been able to discover the *least trace* of a passage between the two. But since both of them are equally diffused over Teneriffe, independently of elevation, and since in an extensive series now before me, collected in ten or twelve different (and distant) localities, *each* is equally constant, I have no option but to treat them as distinct. Like the last species, it was

met with also by Mr Gray, Dr Crotch, and the Barão do Castello de Paiva

### 344 *Attalus pallipes*, n sp

*A* nitidus, capite (vel omnino vel antice solum) prothoraceque (vel omnino vel haud in disco nigro) rufo-testaceis, minutissime et parce punctulatis, elytris subaenescenti-nigris, dense et sat profunde ruguloso-punctatis, pilis nigris erectis longiusculis obsitis, antennis nigris, versus basin pedibusque (elongatis) testaceis — Long corp  $\ln 1\frac{3}{4}$ -2

*Habitat* in Teneriffa et Gomera, a Dom W D Crotch deprehensus

I do not feel perfectly satisfied that this *Attalus* is more than an extreme modification of the *ruficollis*, nevertheless, since the whole of the specimens now before me (seventeen in number, and all of them except one, which is from Gomera, captured by Dr Crotch in Teneriffe) show no tendency to merge into the type assumed by that rather constant species, I do not think it would be safe to treat it as such. It differs from the *ruficollis*, chiefly, in its legs being invariably pale (instead of black), and in the basal portion of its antennæ being likewise more or less brightly testaceous, in its head being either *altogether* pale reddish-testaceous (like the prothorax), or else (as in that insect) with the hinder portion dark, in its prothorax being of a paler, or yellower, hue, and with its disc sometimes black, and in its elytra being a little more roughly punctulated. Its legs are perhaps a trifle longer, and its head just perceptibly more produced, with the antennæ inserted, if anything, somewhat further from either eye

### 345 *Attalus ovatipennis*.

*Attalus ovatipennis*, *Woll*, *loc cit* 429 (1862)

*Habitat* in Lanzarota, Fuerteventura, Canaria, Teneriffa, Gomera et Palma, ad flores, passim

Evidently a most variable insect (having a slightly different aspect in each of the islands in which it has been observed), but one which may be known generally by its ovate (or posteriorly-expanded) outline, by the greenish-brassy tinge of its dark elytra and head, by its prothorax having usually only the hinder margin and angles pale (though occasionally a larger portion of its surface), and by its tibiæ and tarsi (and *parts* of the femora) being diluted-testaceous. It appears to be more widely spread over the Group than any of the other species, Hierro being the only island in which it has not been detected. I have myself taken it in Fuerteventura, Grand Canary,

Teneriffe, Gomera, and Palma In Lanzarote it was captured by M Hartung (one of whose specimens has been communicated to me by Dr Heer), and in Palma by Dr Crotch

### 346 *Attalus bisculpturatus*

*Attalus bisculpturatus*, *Woll, loc cit* 430 (1862)

*Habitat* Fuerteventuram, April mense a d 1859 reperiens

This singular little *Attalus* may be known at once from the other species here enumerated by its very remarkable sculpture,—the head and prothorax (which are much depressed, particularly the former) being opaque, and coarsely and evenly alutaceous (or minutely granulated) throughout, whilst the elytra are shining and merely roughened in the ordinary manner Its colour is black, except the hinder part of the prothorax (which is dull yellow), and the tibiæ, tarsi, and the base of the antennæ (which are brownish-testaceous) The only two examples which I have seen (a male and a female) were captured by myself in Fuerteventura—I believe, in the Rio Palmas—early in April of 1859

### 347 *Attalus rugifrons*

*Attalus rugifrons*, *Woll, loc cit* 431 (1862)

*Habitat* Gomeram, in collibus prope Sanctum Sebastianum ad flores lectus

The present *Attalus*, which has been observed hitherto only in Gomera, is, like most of the species, very variable in colour, nevertheless its subopaque and densely and minutely rugulose head (in which respect it somewhat resembles the *Pteropus angustifrons*), combined with the rufo-testaceous hue of its four anterior legs and the base of its antennæ (the former of which, however, have the *upper edge* of their femora, and occasionally of the tibiæ also, black), will sufficiently distinguish it Its prothorax has *usually* the sides and base broadly testaceous-rufous, but sometimes it is entirely dark, except towards the hinder angles, whilst at others even the *discal* patch is almost obsolete, when nearly the whole surface is pale It was taken from off flowers by Mr Gray and myself on the hills above San Sebastian of Gomera, at the beginning of February 1858

### 348 *Attalus ornatissimus*

*Attalus ornatissimus*, *Woll, loc cit* 431 pl xx f 2 (1862)

*Habitat* in montibus Palmæ, ad flores frequens

The bright cyaneous, or greenish-cyaneous, head and elytra of this beautiful *Attalus* combined with its rufous prothorax, which

has generally only a very broad central band darker, and its usually black limbs, will serve to characterize it. Its head is less shining than the rest of the surface, and is very closely and most minutely rugulose, and much the same kind of sculpture exists, though less densely, on its pronotum, whilst its elytra are very thickly though delicately punctulated, and with the additional erect hairs almost evanescent at the base but very long towards the apex. It has been observed hitherto only on the mountains of Palma. On the 12th of June 1858 I captured it rather abundantly from off flowers, at a high elevation, immediately below the Cumbre above Buenavista, and during the preceding February it was taken more sparingly by Mr Gray at a lower altitude—I believe, in the district of Buenavista itself. Mr Gray's examples I indicated in my diagnosis as a "var  $\beta$ ," in which the prothorax is either almost or entirely rufous, and in some of which the anterior legs and the base of the intermediate femora are infuscated-testaceous. The *A. ornatus* was likewise met with, in Palma, by Dr Crotch.

### 349 *Attalus chrysanthemi*

*Attalus chrysanthemi*, Woll., loc. cit. 432 pl. 11 f. 3 (1862)

*Anthocomus analis*, Hart [nec Puz.], *Geolog. Verhältn. Lanz. und Fuert* 140

*Habitat* Lanzarotum et Fuerteventuram, ad flores (præsertim *Chrysanthemi ochroleuci*, W. et B.) hinc inde vulgaris, sed præcipue in illâ

This beautiful and comparatively constant *Attalus* may immediately be known by its bluish-green, and sometimes ænescent, surface,—the hinder angles and extreme base of the prothorax, together with a large apical portion of the elytra (and a narrow lateral strip arising out of it, and extending to about the middle of the margin) and the legs, being of a pale yellow. The legs, however, which are sometimes infuscated in parts, should perhaps be described as testaceous rather than strictly "yellow." Its surface also is very densely and rather coarsely sculptured, particularly the head and prothorax (which are less shining than the elytra), and its antennæ are black, with the basal joints more or less obscurely rufo-testaceous. That it is the species referred in M. Hartung's list to the *Anthocomus analis*, Panzer, I am enabled to state for certain, having received examples thus identified from Dr Heer (who compiled it). It does not, however, possess a single feature in common with that insect. In very rare cases the large yellow portion at the apex of the elytra is much reduced both in dimensions and intensity, when the legs also are apt to be almost, or

even entirely, dark. Such specimens as these (which however can be connected gradually with the others) I defined, in my diagnosis, as the "var  $\beta$  *dasytoides*"

So far as observed hitherto, the *A. chrysanthemi* appears to be peculiar to Lanzarote and Fuerteventura, where it occurs on the flowers of various plants during the winter and spring, though more particularly those of the *Chrysanthemum ochroleucum* of Webb and Berthelot. In such situations it was taken abundantly by Mr Gray and myself, between Hama and Mágu, in the north of Lanzarote, during January 1858, as also subsequently, by myself, in the same locality, during March of the following year, and, a few weeks later, at Oliva, in Fuerteventura.

### 350 *Attalus commixtus*

*Attalus commixtus*, Woll, loc. cit. 433 (1862)

*Habitat* Lanzarotam borealem, ad flores *Euphorbiae* captus

This *Attalus* is apparently a good deal allied to the *A. chrysanthemi*. It is, however, less depressed, and more acuminate anteriorly, its surface, instead of being cyaneous-green, is dark-æneous, with the entire margins of the prothorax (and not merely the posterior one) of a dull fulvous-yellow, its head and pronotum are narrower, much more shining, and very much less sculptured (the former being almost impunctate, whilst the punctures of the latter are exceedingly shallow and ill-defined), its elytra (which have, especially towards the suture, obscure indications of being longitudinally costate) have a much smaller portion at the apex, and also the entire lateral margin (instead of only half of it) pale, and its paler parts are altogether of a duller or browner tint. The few specimens which I have seen (five in number) were captured by myself from off the flowers of the *Euphorbia piscatoria* and *balsamifera*, on the lofty cliffs known as the "Risco" (overlooking the Salinas), in the extreme north of Lanzarote.

### 351 *Attalus lævicollis*

*Attalus lævicollis*, Woll, loc. cit. 434 (1862)

*Habitat* Lanzarotam borealem, cum sp. præcedente semel lectus

In general character and outline the present species somewhat resembles the last one. It is however larger, with its head and prothorax very highly polished and almost entirely impunctate (a few extremely minute and remote points being alone traceable even beneath the microscope), its elytra are blacker, more coarsely sculp-

tured and with the punctures better defined, apparently free from any indications of longitudinal costæ, and rather less pilose (particularly in front), and its pale portions are altogether of a much lighter yellow,—the prothorax, moreover, having merely a broad central band on its fore disc dark. It is hitherto unique, the single example from which the diagnosis was compiled having been captured by myself (in company with the last species and the *A. chrysanthemi*) in the extreme north of Lanzarote

### 352 *Attalus posticus*.

*Attalus posticus*, *Woll*, *loc cit* 434 (1862)

*Habitat* Fuerteventuram, juxta oppidulum Betancuriam semel lectus

The present *Attalus* may readily be known by its rather large size and somewhat parallel outline, by its short and depressed elytra (which leave, at any rate in the female sex, a considerable portion of the pygidium uncovered), by its large, convex, and deeply punctured head, by its exceedingly bright and very lightly punctulated prothorax, and by its dark hue, the hinder margin of the prothorax and the extreme apex of the elytra (which are less ænescent than the rest of the surface) being alone of a pale whitish-yellow. It was taken by myself in the Rio Palmas of Fuerteventura, close to the little town of Betancuria, at the beginning of April 1859, and is hitherto unique

### 353 *Attalus anthicoides*

*Attalus anthicoides*, *Woll*, *loc cit* 435 pl. xx f. 4 (1862)

*Habitat* Lanzarotam et Fuerteventuram, vel ad flores vel præsertim sub recremento farris circa basin acervorum tritici sparso, unà cum *Anthico canariensi* et cæt. degens

In its general outline, size, and colour this *Attalus* bears such a curious *prima facie* resemblance to the Heteromeioid *Anthicus canariensis* that, until carefully examined, it might literally (although in affinity so remote) be mistaken for that insect. And this analogy is the more remarkable from the fact of the *habits* of the two being almost identical,—the *A. anthicoides* receding from the other members of the group here enumerated in being found not *merely* upon flowers, but (far oftener), like the *Anthici*, beneath dry vegetable refuse lying upon the ground. In such situations I have captured it, rather abundantly, both in Lanzarote and Fuerteventura, to which islands (so far as observed hitherto) it would seem to be peculiar. In fact I have frequently taken it *in company* with the little *Anthicus* above

alluded to, and *when in motion*, at all events, it is next to impossible, from their likeness to each other, to recognize the difference between them. It is usually under the rubbish around the base of corn-stacks that it is to be found, in which positions it appeared pretty general around Haria, in the north of Lanzarote, during March of 1859, and it was only at the *close* of our sojourn there, when the sun had become more powerful, that I succeeded in detecting it upon flowers. My Fuerteventuran specimens are principally from the Rio Palmas.

The almost testaceous hue of the *A. anthracoides*—which has merely its head, the disc of its prothorax, its femora, the basal joint and apical portion of its antennæ, and the region of its elytra about the base and suture dark (the latter being only *gradually* obscured, the two tints shading off into each other)—will immediately characterize it. Its minute cinereous under-pile is rather denser than is the case in any of the preceding species, and its elytra, which are much less shining than the head and prothorax, are of a somewhat softer texture.

§ II *Prothorax cum capite elytrisque concolor; varius ad angulos  
ipissimos posticos obscurissime et anguste pallidus*

### 354 *Attalus tuberculatus*

*Attalus tuberculatus*, Woll., loc. cit. 436 (1862)

*Habitat* Teneriffam, ad flores juxta Portum Orotavæ haud infrequens

Its *uneven* prothorax, which is distinctly longer than broad, and has the central portion at the base slightly raised and *divided in the middle* (so as to form two obscure nodules), and of which the extreme margin at the posterior angles is *usually* narrowly and *obscurely* pale, combined with the minute and somewhat longitudinally disposed subglabrous tubercles of its elytra (the additional hairs of which are very long and very erect), will easily characterize this *Attalus*. Its colour is black, with a barely traceable metallic tinge (which, however, is a *little* more apparent on the head and prothorax than on the elytra), its cinereous under-pile is comparatively coarse and dense, and its limbs are rather thickened, or robust. Hitherto I have observed it only around the Puerto Orotava in Teneriffe, where, however, it is far from uncommon, during the spring months, on flowers.

### 355 *Attalus obscurus*

*Attalus obscurus*, Woll., loc. cit. 437 (1862)

*Habitat* Canariam Grandem, in regione El Monte, præsertim in summo monte "Bandama" tempore vernali ad flores captus

The present *Attalus* I have detected hitherto only in Grand Canary, where it is tolerably common throughout the region of El Monte—particularly towards the summit of the Bandama mountain—during the spring. It may readily be known by its black and *subopake* surface (which however has a slightly ænescent tinge), by its very closely, evenly, and minutely granulose, or *alutaceous*, head and prothorax (in which respect it approaches the *A. bisculpturatus*), by its elytra being almost free from additional erect hairs (the few which are present being moreover exceedingly short), and by the antennæ of its male sex being rather longer than is the case in the generality of the *Attali* here enumerated. Its prothorax is *even*, and more transverse than that of the last species, its cinereous under-pile is more minute, and its elytra have no indications of the small subglabrous longitudinally disposed tubercles which are so evident in that insect.

### 356 *Attalus subopacus*

*Attalus subopacus*, *Woll*, *loc cit* 437 (1862)

*Habitat* Lanzaotam et Fuerteventuram, tempore vernali sat frequens

This *Attalus* appears to be peculiar to Lanzarote and Fuerteventura, where it is rather common during the spring months on flowers, and in the former of which it was taken also by Mr Gray. It may be known by its dark-cyanous hue and but slightly shining (though scarcely subopake) surface, which is more or less perceptibly clothed with a minute cinereous pubescence, by the light (but not very regular) subalutaceous sculpture of its head and prothorax, on which there are only a few excessively small and remote punctures intermixed, and by its very closely punctulated elytra, which are rather flattened on the disc, usually with very faint indications of longitudinal costæ, and beset with erect hairs. My Fuerteventuran examples are principally from the Rio Palmas.

### 357 *Attalus metallicus*.

*Attalus metallicus*, *Woll*, *loc cit* 438 (1862)

*Habitat* Lanzaotam, ad flores, præsertim *Euphorbium* frequens etiam in Teneriffa specimen unum, vix distinctum (=var  $\beta$  *similis*, mihi) apprehendi.

The comparatively deeply sculptured and almost *glabrous* surface of this *Attalus*, in conjunction with its metallic hue (which is generally greenish-brassy but occasionally almost cyaneous), will sufficiently characterize it. It is rather common in Lanzarote, in the north of

which island it was taken by Mr Gray and myself, during January 1858, from off the flowers of Euphorbias, in which district I again met with it early in March of the following year. I also captured a single specimen (the "var  $\beta$  *similis*" of my diagnosis) in Teneriffe, which is altogether a little more deeply and closely punctured, and has the base of its pronotum a trifle raised and uneven, but I cannot think that it is specifically distinct.

### 358 *Attalus ænescens*

*Attalus ænescens*, Woll., loc. cit. 438 (1862)

*Habitat* in Canaria, Teneriffa, Gomeia et Palma, ab orâ maritimâ usque ad 8000' s. m. ascendens

A variable insect, in size, hue, and sculpture, nevertheless it may be known *generally* by its æneous tint, and the small bulk to which it descends, by its rather pubescent and finely punctulated surface, and by its usually dark and more or less slender limbs. The state which I should regard as its typical one is eminently attached to the intermediate and higher elevations of Teneriffe, occurring at the Agua Mansa and on the lofty Cumbre above it, as well as on the *opposite* Cumbre adjoining the Cañadas. It is almost always of a bright-æneous hue, and has its prothorax moderately punctured. The examples in the lower regions have then prothoracic punctures perhaps a trifle more dense, whilst those from the wooded slopes above Taganana have them denser still. The specimens from Palma have, also, their prothorax very thickly, though minutely, punctulated, whilst the few that I met with in the district of El Monte, in Grand Canaiy are of a blacker tint. It was taken by the Rev. R. T. Lowe at Garachico, in Teneriffe, and by Dr. Clotch on the Cañadas, in the same island, as well as in Gomeia and Palma.

### Genus 146 MICROMIMETES

Wollaston, *Journ. of Ent.* 1. 439 (1862)

*Corpus* (in utroque sexu) alatum, *instrumenta cibaria et pedes* fore ut in *Attalo* et *Pectoropo*, sed *capite* paulo majore et (unâ cum *prothorace*) convexiore, et *tarsis anticis masculis* 4-articulatis, simplicibus [nec 5-articulatis art. 2<sup>do</sup> supra in lobum producto]

### 359 *Micromimetes alutaceus*

*Micromimetes alutaceus*, Woll., loc. cit. 441 pl. 11. f. 5 (1862)

*Habitat* Canariam Grandem australem, ad Maspalomas repertus

Although perfectly distinct from it in real *structure*, yet, regarding the present insect *superficially* as an *Attalus* (for which at first sight

it would be taken), I will just add that it may readily be known from its *apparent* allies by its subopaque and entirely *alutaceous* surface, by its dull brassy-black hue (which has often a slightly greenish tinge), the hinder margin of the prothorax, the extreme apex and lateral edges of the elytra, and the limbs (except occasionally a portion of the posterior legs) being pale-yellow, by its head and pronotum being convex, whilst the elytra are somewhat parallel and depressed, and by the latter being almost entirely free from any indication of additional erect pile. The few specimens which I have seen (only fourteen in number) were captured by myself, during April 1858, in the sandy district at Maspalomas, in the extreme south of Grand Canary.

### 360 *Micromimetes*² *jucundus*

*Micromimetes*² *jucundus*, *Woll*, *loc. cit.* 441 (1862)

*Habitat* Canariam Grandem, in regione El Monte exemplar unicum (femineum), tempore vernali A.D. 1858 collegi

I have placed the present insect here merely provisionally, and not with the idea that it is truly a second species of *Micromimetes*, but having unfortunately only a single individual to judge from, and that a *female*, I am unable to conjecture to what group the fore tarsi of its males would tend to assign it. From the shape however of its posteriorly contracted prothorax, which is *raised in the centre* behind, as well as from its general *facies* and nearly glabrous surface, I feel pretty confident that it is not an *Attalus*. But, apart from these particular features, it may readily be known from all the *Attali* here enumerated (with which in some respects it of course agrees) by its rather large, convex, oval, and regularly punctured head, by its bright-rufous and nearly unsculptured prothorax, and by its dark-cyaneous elytra, which apparently have no minute under-pile, and merely an exceedingly few and remote additional erect hairs. My unique example was captured in the region of El Monte, in Grand Canary, during the spring of 1858.

### Genus 147 *CEPHALOGONIA*

*Wollaston*, *Journ. of Ent.* 1 442 (1862)

*Caput in maribus antice excavatum, excavatione postice trisinuata, in medio tuberculo sat magno (ciliato) instructa. Tarsi antici in maribus 4-articulati.*

### 361 *Cephalogonia cerasina*

*Cephalogonia cerasina*, *Woll*, *loc. cit.* 444 pl. xx f. 6 (1862)

*Habitat* in Teneriffa et Palma floribus *Physalidis aristatae* gaudens

The very remarkable colour of this beautiful insect—the *head* (!) and prothorax being of a clear cherry-red, whilst the elytra and legs are dark-cyaneous—will, apart from its structural peculiarities, immediately distinguish it from everything else here enumerated. Its legs are extremely long and slender, and its surface is *almost* glabrous. I have myself observed it only around the Puerto Orotava and Realejo, in the north of Teneriffe—where it is not uncommon during the spring months, making its appearance about the end of February. I have examined, however, a specimen which was taken in Palma, during the spring of 1862, by Dr Crotch. It is particularly attached to the flowers of the *Physalis aristata*, indeed I have never yet detected it upon any other plant or shrub.

### Genus 148 CEPHALONCUS

Westwood, in *Proc Ent Soc Lond* (1863)

*Caput in maribus postice excavatum, excavatione latâ, antice trisinuatâ, in medio tuberculo minuto obscuro instructâ. Tarsi omnes (in utroque sexu) 5-articulati.*

#### 362 *Cephaloncus capito*

*C.* subtilissime pubescens, flavus, capite in maribus plerumque nigro-maculato, sed in foeminis nigro, prothorace brevi, transverso, subrufescenti-flavo, nigro uni- vel trimaculato (maculis interdum transversim confluentibus), elytris maculis duabus (sc unâ humerali, sed alterâ in medio longe ante apicem sitâ) in singulis necnon communi scutellari (sæpius in humerales utrinque mergente) nigris ornatis, antennis, palpis pedibusque pallidis—Long corp lin 1

*Ogccephalus capito*, Westw, *loc cit* (1863)

*Habitat* Canariam Grandem, super arbusculas *Plocamæ pendulæ* juxta Aldea de San Nicholas die 18 Apr A D 1858 parcissime collegi.

The comparatively minute size and yellow surface of this insect, the head of which is black in the females, but (judging from the single male example now before me) only *spotted* with black in the opposite sex, whilst the prothorax has three more or less distinct (though sometimes transversely confluent) patches across its disc, and each of the elytra two larger ones (namely at the shoulders and towards the apex, respectively), render it as easy to be recognized, even *primâ facie*, as the last species. Its limbs, which are relatively not so elongated as those of the *Cephalogonia cerasina*, are entirely pale, the whole of its tarsi (in *both* sexes) are 5-articulate, its surface is more perceptibly, though very minutely, pubescent, and the excavation on the head of its males is wider and *reversed*—being behind instead of

in front, and the trisinuated edge which terminates it being at its *anterior* extremity instead of at the posterior one. The little tubercle in the centre of the scooped-out portion is very minute, and (from the depth of the depression) only just traceable.

The *C. capito* appears to be of the utmost rarity, the very few specimens which I have seen having been captured by myself, on the 18th of April 1858, from off the flowers of *Plocama pendula* in the Barranco at Aldea de San Nicholas, on the western side of Grand Canary.

### Fam. 37. MELYRIDÆ

#### Genus 149 DASYTES

Paykull, *Fna Suec* ii 156 (1798)

#### 363 *Dasytes subænescens*

*Dasytes nigricornis*², Brulle [nec Fab], in Webb et Berth (Col) 60 (1838)

— *subænescens*, Woll, *loc cit* 444 (1862)

*Habitat* insulas Canarienses, in Hierro sola adhuc haud detectus

The present *Dasytes* is closely allied to the common European *D. flavipes*, nevertheless it is a little larger and more pilose, its prothorax is less abbreviated (or somewhat more produced anteriorly) and more transversely constricted behind the apex, its antennæ and tarsi are relatively a little longer, and its entire sculpture is more coarse. We may be almost certain that it is universal throughout the archipelago, though I did not happen to meet with it in Hierro, but in Lanzarote, Fuerteventura, Grand Canary, Teneriffe, and Palma I have taken it (more or less abundantly), and in Gomeira it was found by Dr Crotch. Lanzarotan examples, which were collected by M Hartung, have been communicated by Professor Heer, and from Teneriffe it has been sent by the Barão do Castello de Paiva. In Teneriffe I have captured it from the level of the shore, at the Puerto Orotava, to the lofty Cumbre overlooking the Cañadas—more than 8000 feet above the sea.

#### 364 *Dasytes dispar*.

*Dasytes dispar*, Woll, *loc cit* 445 (1862)

*Habitat* Canariam Grandem, in regione El Monte ad flores captus

Were it not for the *structural* dissimilarity between the male antennæ of the present *Dasytes* and the last one, I might perhaps have regarded them as but states of the same insect, but since those organs

in the species now under consideration are longer and slenderer than in the *subcenscens* (their last five joints being *considerably* more elongated, narrower, and differently shaped), I am compelled to lay greater stress upon certain small additional characters than I should otherwise have done. Apart, therefore, from the antennæ of its male sex, the *D. dispar* may be known from its ally by being a trifle slenderer, blacker, and more pilose, by its prothorax (particularly in the males) being narrower and less developed, and in the females a little more deeply and less closely punctured, by its elytra in the latter sex being more rugose, and by the legs of its males (especially the feet) being, like the antennæ, longer and less robust. I have taken it sparingly throughout the district of El Monte, in Grand Canary, in company with the *D. subcenscens*.

### Genus 150 DOLICHOSOMA

Stephens, *Man Brit Col* 193 (1839)

#### 365 Dolichosoma Hartungu

*Dasytes filiformis*, Heer, *in litt*

——, *Hartung, Geolog Verh. Lanz und Fuert* 140, 141

*Dolichosoma Hartungu*, Woll, *loc cit* 446 (1862)

*Habitat* Lanzarotam, Fuerteventuram, Canariam et Teneriffam, ad flores tempore vernali hinc inde vulgaris

Judging from the description and figure, the present insect is closely allied to the *D. protensum*, Gené, from Sardinia, though at the same time quite distinct from it specifically in most of its characters. It is apparently altogether darker and more deeply punctured, with its prothorax narrower behind and unchanneled on the disc, and with its entire surface considerably less pilose. The sixth joint of its antennæ, from the apex, is perceptibly smaller than either of those which precede and follow it, but this may very probably be the case in its European representative also, though I do not see any notice of the fact in the generic formula. It is *locally* rather common, during the spring months, throughout the eastern and central islands of the Group. I have taken it around Haria, and elsewhere, in Lanzarote, near Oliva, in Fuerteventura, on the calcareous ground at Tafira, in the region of El Monte, in Grand Canary, and on the mountains above St<sup>o</sup> Cruz, as well as around the Puerto Orotava, in Teneriffe. In Lanzarote and Fuerteventura it was captured likewise by M. Hartung, and that it is the insect referred to in his volume under the title of *Dasytes filiformis* I can state for certain, having received a specimen thus identified from Dr. Heer (who prepared the list). It

is, however, unaccompanied by any description, and even if it *had* been characterized, the name could not have been retained, it having been employed by Creutzer for the type of the genus—the *D linearis* of Fabricius

### Genus 151 HAPLOCNEMUS

Stephens, *Ill Brit Ent* iii 316 [script *Aplocnemus*] (1830)

#### 366 *Haplocnemus sculpturatus*

*Haplocnemus sculpturatus*, Woll, *loc cit* 447 (1862)

*Habitat* Teneriffa, Gomera et Palmam, in locis intermediis et elevatis (præsertim his), rarissimus

This large *Haplocnemus* is remarkable for its brassy-brown surface and very deeply sculptured elytra. Its head and prothorax are clothed with a fine silken decumbent pile, but its elytra are *comparatively* bald, the hairs (likewise decumbent ones) with which they are studded being short and few. Its prothorax is convex, with the extreme lateral edges rather pale and minutely crenulated, its legs are testaceous, with the tibiæ sometimes a little darkened, and the last joint of its maxillary palpi is distinctly securiform. It is apparently extremely rare, though widely distributed over Teneriffe, occurring at intermediate and lofty elevations. I have taken it in the wood at La Esperanza, at the Agua Garcia, the Agua Mansa, and from beneath the dead sticks (as well as on the blossoms) of the "Retamas" on the Cumbre overlooking the Cañadas—more than 8000 feet above the sea. I also observed the mutilated remains of it (for they were unquestionably referable to this species) in Palma, and have examined an individual which was captured by Dr Crotch, during the spring of 1862, in Gomera.

#### 367 *Haplocnemus vestitus*

*Haplocnemus vestitus*, Woll, *loc cit* 447 (1862)

*Habitat* in Hierro, in regione El Golfo parce deprehensus

The present *Haplocnemus* differs from the preceding one (which at first sight it much resembles) in being densely beset all over (in addition to the decumbent under-pile of its head and prothorax) with very long, fine, and erect hairs, of which there is no indication whatsoever in the *H sculpturatus*. Its elytra are perhaps a trifle less deeply punctured, and the antennæ of its male sex are somewhat longer and thicker. Hitherto I have observed it only in Hierro, where, during February 1858, I captured five specimens of it in the sylvan district of El Golfo, on the western side of that island.

Genus 152 **MELYROSOMA.**Wollaston, *Ins Mad* 253 (1854)368 **Melyrosoma costipenne.***Melyrosoma costipenne*, *Woll*, *loc. cit* 448 (1862)*Habitat* in montibus Canariæ Grandis, ad flores in pineto quodam excelso Tarajanæ, mense Aprilis a D 1858, sat copiose collegi

The intensely black hue of this *Melyrosoma*, combined with its short, robust, and *decumbent* pile, its subconical prothorax, and the three very elevated costæ with which each of its elytra is furnished, will sufficiently characterize it. It is allied to the Madeiran *M oceanicum*, but is rather larger and of a deeper black, its pubescence also is darker and more decumbent, its prothorax is less abbreviated and more conical, its elytral ridges are more distinct, its entire sculpture is denser and coarser, and its antennæ and palpi are a little more elongated. Like that insect, it is strictly a mountain species, and the only region in which I have hitherto observed it is the lofty Pinal of Tarajana (above San Bartolomé) in the centre of Grand Canary, where, during April 1858, I took it, not uncommonly, on the blossoms of the *Cytisi* and *Cisti*.

369 **Melyrosoma hirtum***Melyrosoma hirtum*, *Woll*, *loc. cit* 449 (1862)*Habitat* in montibus valde excelsis Teneriffæ, rarissimum

The present *Melyrosoma* may be known from the preceding one by the very long, erect, and fine hairs with which it is densely clothed; by its still coarser sculpture, by its prothorax being shorter and more transverse, and with a lightly impressed channel down the disc (instead of merely an abbreviated one, or fovea, behind), and by its elytral costæ being less developed. It bears about the same relation to the Madeiran *M abdominale* as the last species does to the *oceanicum* of those islands, nevertheless its elongated pubescence is still denser, its prothorax is altogether wider (particularly behind), and, together with the head, much more deeply and closely sculptured, and its elytral punctures are larger and more confused (or roughened), having no tendency whatever to be disposed in longitudinal rows.

The *M hirtum* appears to be confined to the higher elevations of Teneriffe, ascending to the very summit of the Peak itself (more than 12,000 feet above the sea), where it was taken by Dr Clotch, during the spring of 1862. Previous to his detection of it at this immense altitude, I had captured only a single individual,—namely from off

the blossoms of a *Cytisus*, during May 1859, on the ascent to the Cumbre above the Agua Mansa

### 370 *Melyrosoma flavescens*

*Melyrosoma flavescens*, *Woll*, *loc cit* 449 (1862)

*Habitat* in montibus Palmæ, Junio ineunte A D 1858 ad flores captum

The comparatively small size and narrow outline of this interesting little *Melyrosoma*, in conjunction with the rather robust but nearly decumbent yellowish-cinereous pile with which it is densely clothed, and its slender limbs, will at once separate it from both of the preceding species. And it is somewhat remarkable that, whilst the *M costipenne* and *hutum* would seem to represent at the Canaries the Madeiran *M oceanicum* and *abdominale*, respectively, the present one may be regarded as the analogue of the *M artemisiae* of those islands. And yet, in spite of this general resemblance, it is abundantly distinct from it specifically. Thus, it may be known from it by its larger size and more anteriorly-acuminated outline, by its pubescence being comparatively short and decumbent (instead of long, fine, and erect), by its prothorax being much narrower, less abbreviated, and more conical, by its entire sculpture being closer and less coarse, and by its male antennæ being very much shorter, with each individual joint considerably less developed.

The *M flavescens* was captured by myself on the mountains of Palma—from off the perpendicular rocks which bound the great Pinal (above the plains of Los Llanos) in the district of the Banda, at the beginning of June 1858

## Fam. 38. CLERIDÆ.

### Genus 153 CLERUS

Geoffroy, *Hist Abr des Ins* 303 (1764)

### 371 *Clerus parvæ*

*Clerus parvæ*, *Woll*, *Trans Ent Soc Lond* (3rd series) i 163 pl vii f 5 (1862)

*Habitat* in ramis *Euphorbia*, um emortuus in Lanzarota, Fuerteventura, Canaria Teneriffa et Hierro, rarissimus

This most interesting little *Clerus*, which is the only member of the genus hitherto detected in any of these Atlantic islands, is apparently extremely scarce, though from the peculiarity of its habits it

would probably be found more plentifully if searched for in the proper situations. It is quite peculiar to the stems and branches of the decayed Euphorbias, and although it has not been observed as yet in either Gomera or Palma, there can be little doubt (despite its rarity) that it must exist there also, and that it is consequently universal throughout the archipelago. I have taken it on the *Euphorbia*-clad cliffs in the extreme north of Lanzarote, near Betancuria, in the Rio Palmas, of Fuerteventura, close to Puerto da Luz and the Isleta, in Grand Canary, and on the mountains above Sta Cruz, as well as around Orotava, in Teneriffe, and it was likewise captured by Mr Gray in Lanzarote, and near Valverde in Hierro.

### Genus 154 CORYNETES

Hebst, *Kaf* iv 148 [script *Korynetes*] (1791)

§ I *Corpus minus profunde sculpturatum, oculis magnis, antennarum clavâ magnâ obtriangulari, ad apicem latâ truncatâ, palporum marillarum articulo ultimo fusiformi* [Necrobia, Oliv.]

#### 372 *Corynetes rufipes*

Anobium rufipes, *Thunb*, *Nov Ins Spec* i 10 (1781)

Corynetes rufipes, *Fab*, *Syst Eleu* i 286 (1801)

Necrobia rufipes, *Brulle*, in *Webb et Beith* (*Col*) 60 (1838)

Corynetes rufipes, *Klug*, *Abhandl der Wissensch Acad zu Berl* 340 (1840)

*Habitat* Lanzarotam, Fuerteventuram, Canariam, Teneriffam et Gomeram, in cadaveribus et circa domos, hinc inde sat vulgaris

This almost cosmopolitan insect (which is found at the Cape de Verdes and Ascension, and which I have captured abundantly at Mogadoie, on the coast of Morocco) has established itself pretty generally at the Canaries, occurring principally in and around the towns. We may be tolerably sure that it is universal throughout the archipelago, nevertheless I have myself observed it only at Arrecife in Lanzarote, in Fuerteventura, about Las Palmas in Grand Canary, and near Sta Cruz in Teneriffe. But I have examined specimens which were taken by Dr Crotch in Gomera, and I have little doubt that it must exist equally in Palma and Hierro. In Lanzarote it was met with likewise by Mr Gray, and from Teneriffe it has been communicated by the Barão do Castello de Paiva.

#### 373 *Corynetes ruficollis*

Anobium ruficolle, *Thunb*, *Nov Ins Spec* i 8 (1781)

Dermostes ruficollis, *Fab*, *Ent Syst* i 230 (1792)

Necrobia ruficollis, *Woll*, *Ins Mad* 258 (1854)

— —, *Id*, *Cat Mad Col* 88 (1857)

*Habitat* Teneriffam, juxta urbem Sanctæ Crucis captus

Like the last species, the present one (which abounds around Funchal in Madeira) is nearly cosmopolitan—having become naturalized, through the medium of commerce, in most countries of the civilized world, nevertheless hitherto I happen to have taken but two specimens of it in these islands, namely in the Barranco Santo, near S<sup>ta</sup> Cruz, of Teneriffe. It is clearly, therefore, scarcer than the *C. rufipes*.

§ II *Corpus profunde sculpturatum, oculis paulo minoribus, antennarum clavâ minore (sed ad basin magis abruptâ) oblongâ, articulis inter se subæqualibus (ultimo vir longiore), palporum maxillarum articulo ultimo fusiformi, apice subacuminato* [Opetiopalpus, Spinola]

### 374 *Corynetes fimetarius*

*C. nitidus*, pilis erectis mollibus et (præsertim in capite prothoraceque) elongatis ubique vestitus, capite prothoraceque læte cupreis, dense et profunde punctatis, scutello cupreo-viridi, elytris cyaneis, valde profunde seriatim rugoso-punctatis, antennis nigris, basin versus vix dilutionibus, pedibus nigrescentibus, tasis dilutionibus ad basin testaceis

*Variat* (rarissime) capite prothoraceque (ut scutello) cupreo-viridibus  
—Long corp.  $\ln 1\frac{1}{3}$ —2

*Corynetes fimetarius*, Woll., *Ann. Nat. Hist.* (3rd series) ix 440 (1862)

*Habitat* Lanzarotam et Fuerteventuram, in stercore arido bovino, equino, camelino (nec humano), tempore vernali haud infrequens

I believe that this beautiful *Corynetes* should be regarded as a member of the subgenus *Opetiopalpus*, Spinola, though certainly in the last joint of its maxillary palpi (which is but very slightly acuminate at the apex), and in the shape of its prothorax, it departs less from the ordinary *Necrobis* than the *O. collaris* (from the Cape of Good Hope) does, of which I have several examples now before me. However, even in these two particulars it undoubtedly approaches the South-African *Opetiopalpi*, whilst in its general facies, deeply sculptured and greatly pubescent surface, as also in the structure of its antennæ—which have their anteclaval articulations minute, and the club itself (which is consequently abrupt at the base) much smaller and more oblong (the first and second joints being equal, whilst the third is not at all wider, and but very slightly longer)—it is so precisely similar to the representatives of that group that I suspect it should be included in it. Nevertheless, being osculant in some respects, it would tend still further to prove that the group itself, like *Necrobis*, is, at the utmost, but a Section of *Corynetes*.

In its purely specific details, the *C. fimetarius* may be immediately known by its coarsely sculptured and very hairy surface, by the bright

coppery hue of its head and prothorax, and by its cyaneous elytra. So far as observed hitherto, it appears to be confined to Lanzarote and Fuerteventura, and in its habits it is (for a *Corinyetes*) exceedingly anomalous, for I have never yet captured it except in the dung of cattle (horses, oxen, camels, &c) in the open country. But in such situations it is far from uncommon during the spring months (in company with the *Notiomimus fimicola* and various *Saprin* and *Aphod*), preferring the driest and most barren spots. In Lanzarote it was found also by Mr Gray.

### Fam. 39. PTINIDÆ.

#### Genus 155 CASOPUS.

Wollastor, *Trans Ent Soc Lond* 1 194 [script *Casapus*] (1862)

#### 375 *Casopus Bonvouloiri*

*Casopus Bonvouloiri*, Woll, *Trans Ent Soc Lond* (3rd series) 1 196 pl viii f 1 (1862)

*Habitat* in sylvaticis subeditoribus humidis Teneriffæ, rarissimus

I do not think it necessary to give any lengthened details (diagnostic or critical) respecting the members of the present Family here enumerated, having fully done so (both as to genera and species) in my Paper on the "*Ptinidæ* of the Canary Islands" which has lately been published in the 'Trans of the Ent Soc of London'. I must therefore refer the reader, for all minute particulars, to that Memoir.

The large and posteriorly-acuminated *C Bonvouloiri* appears to be confined to the damp sylvan regions of a rather high elevation, in Teneriffe, my specimens being from the mountain-district of the Agua Mansa. It is evidently both local and rare. It was found also, though sparingly, by Dr Crotch.

#### 376 *Casopus dilaticollis*

*Casopus dilaticollis*, Woll, *Trans Ent Soc Lond* (3rd series) 1 197 (1862)

*Habitat* Teneriffam et Gomeram, in locis inferioribus necnon intermedus (præsertim illis) degens

Whilst the *C Bonvouloiri* is confined to the damp sylvan districts of a rather high elevation, in Teneriffe, the present species (which, *inter alia*, has its prothorax much dilated anteriorly) descends to the sea-level,—the upper limit of its range scarcely reaching the lower one of that insect. Indeed the examples from the intermediate districts (Taganana, Las Mercedes, Souzal, &c) are less typical than those

from the inferior ones, being a little less densely setose, rather more acute behind, and with the basal ridges of their elytra more developed. Such specimens I regarded in my Paper as the "*var β*". In its normal phasis I have taken it in the Barranco do Passo Alto, close to S<sup>t</sup>i Cruz, on the lower mountain-slopes towards Laguna, adjoining the beach at the Puerto Orotava, in the direction of the Cemetery and Lazaretto, and at Ycod el Alto. Two examples of it have also been communicated by the Barão do Castello de Paiva, and I have inspected two more which were found by Dr Crotch in Gomera. These latter have their inner prothoracic costæ rather more developed than in the ordinary Teneriffan specimens, and their outer ones somewhat less so, and their elytra are a little more oblong. But I do not think that they are indicative of more than an insular state (*var γ*) of the *C dilaticollis*.

### 377 *Casopus alticola*

*Casopus alticola*, Woll, *Trans Ent Soc Lond* (3rd series) 1 198 pl viii f 2 (1862)

*Habitat* in locis intermediis et valde elevatis Teneriffæ, rarissimus

As stated in my Paper above alluded to, it is just possible that this insect may be but a phasis of the preceding one peculiar to the loftier elevations of Teneriffe,—in which case, however, it would of course imply the range of that species to be greater than I have supposed. Nevertheless I gave my reasons for concluding that, although undoubtedly nearly allied to the *dilaticollis*, it is probably distinct from it. It differs mainly in its elytra being more deeply striate-punctate, a little more drawn-in at the shoulders and with their fasciæ generally more conspicuous, and in the first joint of its hinder male-feet being somewhat less developed. I have taken it, sparingly, on the wooded mountains about the Agua Mansa, and also on the Cumbre (adjoining the Cañadas) above Ycod el Alto—at more than 8000 feet above the sea.

### 378 *Casopus radiosus*

*Casopus radiosus*, Woll, *Trans Ent Soc Lond* (3rd series) 1 199 (1862)

*Habitat* in montibus Canariæ Grandis, sub lapidibus paucè lectus

This *Casopus* (remarkable, *inter alia*, for its prothorax being scarcely at all dilated in front, and for its elytra being distinctly striate-punctate, with their abbreviated basal ridges very numerous and well defined) seems to be peculiar to the mountains of Grand Canary—where, during the spring of 1858, I captured it, very sparingly, on the ascent to the Roca del Soueilho, above San Mateo.

379 *Casopus subcalvus*

*Casopus subcalvus*, *Woltz, Trans Ent Soc Lond* (3rd series) 1 200  
pl. viii f 3 (1862)

*Habitat* in ins Hierro, haud procul ab oppido Valverde, mense  
Februario A D 1858, sub lapidibus parce repertus

The entire, or almost entire, freedom of the elytra of this *Casopus* from erect hairs (but which are nevertheless studded with a very minute decumbent pile), combined with the immensely developed basal joint of its hinder male-feet, will, apart from numerous other characters of secondary importance, at once distinguish it. So far as observed hitherto, it is confined to the island of Hierro—where, in February of 1858, it was captured, very sparingly, by Mr Gray and myself, from beneath stones, about a mile to the north-westward of Valverde. It must be regarded, therefore, when the remoteness of its *habitat* is taken into account, as one of the rarest of the Canarian Coleoptera.

Genus 156 **DIGNOMUS.**

Wollaston *Trans Ent Soc Lond* (3rd series) 1 201 (1862)

380 *Dignomus gracilipes*

*Dignomus gracilipes*, *Woll, Trans Ent Soc Lond* (3rd series) 1 202  
pl. viii f 4 (1862)

*Habitat* Lanzaotam et Fuerteventuam, in stercore arido (bovino, equino, camelino, nec humano) tempore vernali, rarissimus

Of this singular insect (which has all the aspect *primâ facie* of a parallel, slender, and curiously mottled *Ptinus*) I have given the full structural and diagnostic details in my Paper on the Canarian *Ptinidae*. It seems to be of excessive rarity, and to be peculiar to Lanzarote and Fuerteventura—where, during the spring of 1859, I took it, very sparingly, in the low sandy districts, near Arrecife of the former and Corralejo in the extreme north of the latter. In its habits it is (for a member of the present Family) very anomalous—occurring only, so far as I have observed hitherto, in the dried dung of horses, oxen, and camels, in company with the *Notiomimus finuola* (of the *Anobiidae*), the beautiful *Corynetes fimetarius* (of the *Cleridae*), and sundry other insects of normally stercoracious propensities.

Genus 157 **PTINUS**

Linnaeus, *Syst Nat* 11 565 (1767)

381 *Ptinus testaceus*

*Ptinus testaceus*, *Oliv, Ent* 18 8 (1790)  
—— *advena*, *Woll, Ins Mad* 261 (1854)

- Ptinus testaceus*, *de Boeld*, *Ann de la Soc Ent de France*, (3ième série)  
 iv 654 (1857)  
 ———, *Woll*, *Cat Mad Col* 89 (1857)

*Habitat* in Hierro, semel tantum lectus

A single (female) example of this European *Ptinus* was taken, by myself, on the walls of a house, in Hierro, during our visit to that island in February 1858. It is unquestionably a mere importation, or at the utmost naturalized from more northern latitudes, and is therefore of but trifling importance.

### Genus 158 **MEZIUM**

(Leach) *Curtis*, *Brit Ent* v 232 (1828)

#### 382 **Mezium sulcatum**

- Ptinus sulcatus*, *Fab*, *Spec Ins* i 73 (1781)  
*Gibbium sulcicole*, *Brulle*, in *Webb et Berth (Col)* 60 (1838)  
*Mezium sulcatum*, *Woll*, *Ins Mad* 273 (1854)  
 ———, *Id*, *Cat Mad Col* 92 (1857)  
*Gibbium sulcicole*, *Hartung*, *Geolog Verhalm Lanz und Fuert* 140

*Habitat* insulas omnes Canarienses, præsertim sub lapidibus in aridis vulgaris

The *M. sulcatum* (which is common at Madeira, and which is scattered sparingly over central and southern Europe) is universal at the Canaries, for although I did not happen myself to meet with it during our short stay at Gomera, it has been found there subsequently (at Hermigua) by Dr Crotch, and in the other six islands of the Group I have taken it, more or less abundantly. It occurs principally beneath stones and scoræ in dry, rocky spots,—especially in the open basaltic caves towards the coast (in company with certain *Hegeters*), and at a rather low elevation. It varies immensely in size, and has its elytra occasionally studded with a few stiff erect bristles, nevertheless they are usually quite glabrous. From Teneriffe it has likewise been communicated by the Barão do Castello de Paiva.

### Genus 159 **NITPUS**

Duval, *Glan Entom* 138 (1860)

#### 383 **Nitpus gonospermi**

- Nitpus gonospermi*, *Duv*, *Glan Entom* 138 (1860)  
 ———, *Woll*, *Trans Ent Soc Lond* (3d series) i 206 (1862)

*Habitat* Teneriffam et Gomeram, hinc inde haud infrequens

The remarkable fact of the antennæ of this minute member of the *Ptinidæ* being composed of merely nine joints is sufficient of itself to characterize it, nevertheless in other respects it has much the ap-

pearance, *primâ facie*, of the two following *Sphærici*, and of the *S albopictus* from the Madeiran Group. Hitherto I have myself observed it only in Teneriffe, but it was taken rather commonly, by Dr Crotch, near Hermigua in Gomera. In the rocky ground above the Puerto of Orotava, in Teneriffe, I have brushed it, abundantly, from off the dead plants of a large *Tanacetum*, and I have likewise met with it in a small Barranco near Souzal, as well as at Taganana. Like the *Sphærici* it is excessively variable in stature, descending to a most diminutive bulk.

### Genus 160 SPHÆRICUS.

Wollaston, *Ins Mad* 263 (1854)

#### 384 *Sphæricus simplex*

*Sphæricus simplex*, *Woll, Trans Ent Soc Lond* (3rd series) 1 207 pl viii f 6 (1862)

*Habitat* in Gomera et Hierro, in hac haud procul ab oppido Valverde mense Februario a d 1858 pauca specimina collegi, in illâ cepit W D Crotch

The distinctions between the present insect and the Madeiran *S albopictus*, which at first sight it closely resembles (its almost undilated penultimate tarsal joint being the most important of them), have been fully pointed out in my Paper on the Canarian *Ptinidae*. The few specimens of the *S simplex* which I have myself taken were captured near Valverde, in the island of Hierro, during February 1858, but I have lately examined an individual which was found by Dr Crotch in Gomera.

#### 385 *Sphæricus gibbicollis*

*Sphæricus gibbicollis*, *Woll, Trans Ent Soc Lond* (3rd series) 1 208 (1862)

*Habitat* in Lanzarota et Fuerteventura, rarissimus

Four specimens only of this distinct *Sphæricus* (which may be known, *inter alia*, by its anteriorly-gibbous prothorax) have as yet come beneath my notice. Two of them I captured at Yé, in the extreme north of Lanzarote, during March 1859, and the other two I beat out of an old bush of the Common Rosemary (*Rosmarinus officinalis*) at Agua Bueyes, in Fuerteventura, on the 28th of January of the preceding year.

#### 386 *Sphæricus impunctipennis*, n sp

*S* vel nigro- vel fusco-piceus, capite prothoraceque ruguloso-punctatis, squamis magnis flavescenti-cinereis densissime tectis, hâc bie-

viter subcylindrico, in disco postico vix subgibboso, elytris convexis, rotundato-obovatis, haud sculpturatis sed parce et minute subflavescenti-brunneo-squamosis et fasciâ postmediâ albidior (valde indistinctâ et valde fractâ) ornatis, antennis pedibusque robustis, vel piceis vel rufo-ferrugineis, dense subflavescenti-squamosis —Long corp ln  $1-1\frac{1}{4}$

*Habitat* Gomeram, a cl W D Crotch nuper repertus

The three specimens from which the above diagnosis has been compiled were taken near Hermigua in Gomera, by Dr Crotch, during the spring of 1862. They are at once characterized by their totally unsculptured elytra (which are convex and obovate, and ornamented with a very indistinct and much broken postmedial paler fascia), and by their surface being clothed with yellowish-brown silken scales—which however are paler, denser, and more robust upon the head and prothorax than on the elytra. The species is very closely related to the Madeiran *S. pinguis*

### 387 *Sphæricus Crotchianus*, n sp

*S* capite prothoraceque squamis cinereo-brunneis densissime tectis, hoc sat magno, ad latera subangulato-ampliato, in disco postico gibboso et in medio canaliculato, elytris rotundato-subquadratis, profunde punctato-striatis, brunneo-squamosis, setulis brevissimis suberectis parcissime obsitis et fasciâ postmediâ albidâ (plus minus indistinctâ fractâ) ornatis, antennis pedibusque robustis, clare rufo-ferrugineis, fulvo-squamosis —Long corp ln  $1\frac{1}{4}-1\frac{1}{2}$

*Habitat* Gomeram, a Dom Crotch cum specie præcedente captus

This robust *Sphæricus* may at once be known from the three preceding species by its larger size, and by its surface being more uniformly and densely clothed with dirty-brown mud-like scales (which, however, are a shade paler on the head and prothorax than on the elytra), by its prothorax (which is a good deal developed) being uneven, or gibbous, on the hinder disc, with a wide but shallow channel, and suddenly rounded-out on either side so as to form almost an angle in the middle, and by its elytra being subquadrate, a good deal drawn-in (or downwards) at their apex, very deeply punctate-striated, beset with exceedingly short and remote suberect setæ, and ornamented with a whitish postmedial fascia (which, however, in one of the examples now before me is scarcely traceable). Like the last species, it is due to the researches of Dr Crotch,—the only two specimens which I have seen having been taken by him near Hermigua in Gomera, during the spring of 1862. I have much pleasure in dedicating to its discoverer so distinct and interesting a *Sphæricus*

Genus 161 **PIARUS.**Wollaston, *Trans Ent Soc Lond* (3rd series) 1 209 (1862)388 **Piarus basalis.***Piarus basalis*, *Woll*, *Trans Ent Soc Lond* (3rd series) 1 210 pl viii f 7 (1862)*Habitat* Lanzaotam et Fuerteventuam, in stercore arido (sc bo-vino, equino, camelino) unà cum *Dignomo*, *Notomimo* et cæt degens

The dark blackish-piceous hue of this insect, combined with its very densely and roughly punctured prothorax, the fascia of pale scales with which its elytra are ornamented immediately behind their extreme base, and the long, stiff, and suberect hairs with which it is thickly clothed, will readily distinguish it. It seems to be peculiar to Lanzarote and Fuerteventura, where it is not uncommon during the winter and spring months,—secreting itself principally (like *Dignomus*, *Notomimus*, and the *Corynetes finetarius*) in the dried dung of horses, oxen, and camels, in the most arid and dusty spots. It occurs, however, though less frequently, beneath stones likewise. In both of those islands it was found also by Mr Gray.

Genus 162 **PIOTES.**Wollaston, *Trans Ent Soc Lond* (3rd series) 1 211 (1862)389 **Piotes inconstans***Piotes inconstans*, *Woll*, *Trans Ent Soc Lond* (3rd series) 1 212 pl viii f 8 (1862)*Habitat* Canariam Giandem, sub lapidibus in locis aridis, rarissima

The present insect, which I have observed only in Grand Canary, is a most variable one, both in its clothing and in the ornamentation of its elytra. As regards the former, the rigid scale-like pubescence with which it is densely beset is sometimes unmixed with additional erect hairs, and this state, which is found at Maspalomas in the extreme south of the island, is the “ $\alpha$ ” of my diagnosis (above referred to) at others the additional erect hairs are elongate and robust (the “ $\beta$ ” of my diagnosis, which occurs at Arguineguen) whilst occasionally they are extremely long and fine—in which last predicament it corresponds with the “ $\gamma$ ” indicated in my description, and this is the form which it assumes in sandy and calcareous places around and above Las Palmas. And with respect to the arrangement of its pale scales, it may be sufficient here to remark that the two large transverse fasciæ with which its elytra are adorned are

sometimes (though rarely) distinct and well defined, whilst at others they are almost, or even entirely, suffused *inter se* and lost sight of—under which circumstances the elytra are simply of a dull dirty-white, with scarcely any indications of markings at all.

### 390 *Piotes vestita*.

*Piotes vestita*, *Woll, Trans Ent Soc Lond* (3rd series) 1 213 pl viii f 9 (1862)

*Habitat* Palmam, in locis intermediis sub lapidibus, rarissima

The very short and perfectly decumbent yellowish-brown pile with which the entire surface of this large *Piotes* is uniformly and densely clothed, combined with the two greatly elevated and parallel ridges of its laterally-compressed prothorax, and its very oval elytra (which are much rounded-off about the shoulders), will sufficiently characterize it. It is apparently peculiar to Palma, and of excessive rarity. I have taken it, very sparingly, high up in the Barianco above Sta Cruz, as also on the sylvan slopes above Buenavista, on the ascent to the Cumbre, and I have examined a specimen which was captured in Palma by Dr Crotch.

## Fam. 40. ANOBIADÆ.

### Genus 163 STAGETUS

Wollaston, *Ann Nat Hist* (3rd series) vii 11 (1861)

After comparing my *Stageti* (published on the 1st of January 1861, and re-enumerated below) with a specimen of the *Theca byrrhordes* of Aubé, which has been lent me by Mr Pascoe, and which was captured by him in the south of France, I feel almost certain that the two genera are identical, though, as I have not been in a position to dissect the latter, perhaps I ought to speak with some little hesitation, seeing that there are undoubtedly a few points *even externally* in which the members of them do not exactly coincide. Upon the whole, I should say that *Theca* was rather more on the true *Anobium*-type than *Stagetus*,—its entire outline being less orbicular and its prothorax less strictly conical. Its scutellum, also, is considerably larger, and less triangular, and its antennæ are slenderer, except the club, which, on the contrary, is rather more developed—its first and second joints being more produced internally (whilst in *Stagetus* the whole three are comparatively parallel at the sides, or elongate-quadrate). Still, whether these modifications are indicative of others, of at least equal importance, in the oral organs, I am of course unable to say, though

as I have given the full details of *Stagetus* in my Paper on the "*Anobradæ* of the Canary Islands," this point may perhaps be decided positively by those who possess the genus *Theca* in sufficient abundance to permit them to destroy a specimen for dissection. Even should they prove, however, to be identical, I believe that *Stagetus* will have the priority as regards the date of publication.

### 391 *Stagetus crenatus*

*Stagetus crenatus*, Woll, *Ann. Nat. Hist.* (3rd series) vii 13 (1861)

*Habitat* Teneriffam, rarissimus, inter lichenes ad truncos arborum vetustos crescentes præcipue degens

Apparently of the greatest rarity, but scattered over the intermediate elevations of Teneriffe,—occurring usually amongst lichens on the trunks and branches of trees. In such situations I have taken it in the woods above Taganana, in a small Barranco near Souzal, and at Ycod de los Vinhos, and I have examined a single specimen which was captured by Dr. Crotch—I believe, at Ycod el Alto.

### 392 *Stagetus hirtulus*.

*Stagetus hirtulus*, Woll, *Ann. Nat. Hist.* (3rd series) vii 12 (1861)

*Habitat* in Gomera et Hierro, in locis similibus ac præcedens rarissimus.

Whether the *S. hirtulus* be more than an insular modification of the last species I will not undertake to pronounce for certain. It differs from it mainly in the striæ of its elytra being finer and scarcely perceptibly (if indeed at all) crenated, and by the pubescence which clothes its entire upper surface being longer and somewhat denser. I have observed it hitherto only in Hierro—where, during February 1858, I captured it, very sparingly, from amongst rubbish at the base of an old wall in an exposed situation near Valverde. Possibly, however, it may have fallen from off the minute Cryptogamic plants with which the wall was partially studded. And I likewise took it in the sylvan district of El Golfo, on the western side of that island. I have inspected an example which was found by Dr. Crotch, during the spring of 1862, in Gomera, and likewise two others (captured in the same locality) which differ in being larger and in having their elytral striæ still more lightly impressed. But I doubt if they can be regarded as more than a "var.  $\beta$ " of the *hirtulus*.

## Genus 164 XYLETINUS

Latzeille, *Regne Anim.* (ed. 2) iv. 483 (1829)

§ I *Oculi maximi palpi maxillares articulo ultimo securiformi, simplici*

### 393 *Xyletinus latitans*

*Xyletinus latitans*, Woll, *Ann Nat Hist* (3rd series) vii 14 (1861)

*Habitat* in Lanzarota, Fuerteventura, Teneriffa et Hierro, sub cortice *Euphorbiarum* arido laxo latitans

Not to mention the slight difference in the form of the ultimate joint of its maxillary palpi, which appears to have no indication whatever of a scooping-out along its oblique apical edge, the less evidently punctulated surface and rather longer and paler pubescence of this *Xyletinus*, combined with its somewhat less rounded-off shoulders, very much larger eyes, and usually paler limbs, will serve to distinguish it from the following one (which at first sight it closely resembles). It seems to be pretty widely spread over the archipelago, and indeed, from its *Euphorbia*-infesting habits, it is most probably universal. Hitherto, however, I have observed it in only four out of the seven islands of the Group—namely Lanzarote, (in the Rio Palmas of) Fuerteventura, (at Taganana and Orotava in) Teneriffe, and (at a low elevation in the district of El Golfo in) Hierro.

§ II *Oculi minores (sed sat magni) palpi maxillares articulo ultimo securiformi, sed per apicem internum plus minus oblique excavato* [Gen. *Metholcus*, Dural]

### 394 *Xyletinus desectus*

*Xyletinus desectus*, Woll, *Ann Nat Hist* (3rd series) vii 13 (1861)

*Habitat* in Canaria et Teneriffa, rarissimus

On re-examining this insect, I find that the securiform last joint of its maxillary palpi is slightly excavated along its oblique apical edge, so that it must needs be removed into the present Section. The scooping-out, however, of this terminal articulation is a character (even though a structural one) which is *more or less* expressed according to the species, and I am doubtful, therefore, whether it can be employed for more than a *subgeneric* purpose. As may be gathered from a reference to the diagnosis given in my Paper (above alluded to) on the Canarian *Anobiidae*, the present *Xyletinus* and the preceding one approach each other very closely at first sight, but in spite of this, their distinctions are not the less real. Apart from the difference in the last joint of their respective maxillary palpi, the *X. desectus* may be known from the *latitans* by being (although minutely) much more evidently punctulated (when viewed beneath the micro-

scope), by its pubescence being a little shorter and yellower, and with a more perceptible tendency to be longitudinally disposed on the elytra, by its humeral angles being a trifle more rounded-off, by its eyes being considerably smaller, and by its limbs being usually a shade darker,—the antennæ having, also, their basal articulation a little less inflated

Hitherto I have seen but three specimens of the *X. desectus*,—two of which I captured in the region of El Monte in Grand Canary, and the remaining one (which is rather smaller) at Souzal in Teneriffe

### 395 *Xyletinus brevis*.

*Xyletinus brevis*, Woll, *Ann Nat Hist* (3rd series) vii 15 (1861)

*Habitat* Palmam, mense Maio A D 1858 deprehensus

The last joint of the maxillary palpi of the present little *Xyletinus* is rather more evidently scooped-out than in the preceding species, but not so much so as is the case in the following one. In other respects it may be known by its small size and short-oval outline, and by its subventricose elytra, which are a good deal rounded at the sides. The only two specimens which I have seen were captured by myself in the Barranco above St Cruz in the island of Palma, during May 1858

### 396 *Xyletinus excavatus*

*Xyletinus excavatus*, Woll, *Ann Nat Hist* (3rd series) vii 15 (1861)

*Habitat* Canariam Grandem, mense April A D 1858 exemplar unicum cepi

In the *X. excavatus* the ultimate joint of the maxillary palpi is very considerably scooped-out along its oblique apical edge, and, apart from this, it may be known by its comparatively dark hue, more distinctly punctulated prothorax, broader tibiæ, and slender feet, the first and second articulations of which are relatively somewhat longer. The only example which I have seen was captured, by myself, in the south of Grand Canary, during April 1858

## Genus 165 NOTIOMIMUS

Wollaston, *Ann Nat Hist* (3rd series) vii 15 (1861)

### 397 *Notiomimus fimicola*.

*Notiomimus fimicola*, Woll, *Ann Nat Hist* (3rd series) vii 17 (1861)

*Habitat* Lanzarotam et Fuerteventuram, in stercore arido (bovino, equino, camelino, nec humano) latitans

For the less conspicuous structural details of this species I must

refer to my Paper on the Canarian *Anobiadæ*, already alluded to. In its reddish-brown hue, minutely sericeous surface, crenate-striated elytra, and general outline, it is more on the *Anobium*-type than the Canarian *Xyletin* just enumerated, whilst the strictly *fusiform* last joint of its palpi, and the *comparatively* elongated second one of its feet, will still further separate it therefrom. Its head is rather largely developed, and closely applied to the chest when the insect is in a state of repose, and its habits, for a member of the present family, are decidedly anomalous—being, in fact, precisely similar to those of *Dignomus gracilipes* (of the *Ptinidæ*) and the *Corynetes fimetarius* (of the *Cleridæ*). Indeed I have never yet detected it except in the dried dung of oxen, horses, and camels—in which situations it is not uncommon throughout Lanzarote and Fuerteventura during the spring months, particularly in the most arid and dusty spots. So far as I have observed hitherto, it is peculiar to those two islands.

Whether *Notiomimus* be identical with *Pseudochina* of M. Duval, I have no means of deciding for certain, but as the diagnosis of that genus asserts the terminal joint of its palpi to be exceedingly long and *subcylindric*, its body *ovate*, and its elytra merely minutely punctulated (whilst those of *Notiomimus* are deeply crenate-striate), I am inclined to believe that it is probably distinct from it.

### 398 *Notiomimus holosericeus*

*Notiomimus holosericeus*, Woll., *Ann. Nat. Hist.* vii. 17 (1861).

*Habitat* Teneriffam et Palmam, mihi non obviis. mense Februario A.D. 1858 exemplar unicum in hac deprehendit Dom. Gray, et alterum in illâ cepit W. D. Crotch.

As stated in my Paper on the Canarian *Anobiadæ*, this species may be readily distinguished from the preceding one “by its less rufescent hue and more densely and coarsely sericeous surface (which is more glossy, or variegated, with the short silken pubescence), by its rather larger and more prominent eyes, its obscurely raised-alternate elytral interstices, its more decidedly carinated forehead, and by its longer and robuster limbs.” A single example of it was captured by Mr. Gray in Palma, during February 1858, and has by him been presented to the collection of the British Museum, and a second was found by Dr. Crotch in Teneriffe (“from under rubbish in the ravine below Ycod el Alto”), during the spring of 1862.

### 399 *Notiomimus punctulatissimus*

*Notiomimus punctulatissimus*, Woll., *Ann. Nat. Hist.* vii. 17 (1861).

*Habitat* Canariam Grandem, mense Aprili A.D. 1858 reperiuntur.

The smaller size and rather more oval outline of this *Notiomimus*, combined with its perceptibly shorter limbs, yellower pubescence, most densely (though minutely) punctulated surface, and unstriated elytra (which entirely cover the pygidium), will sufficiently distinguish it from both of the foregoing species. Indeed its entire aspect is altogether somewhat different, and it is not impossible that it, at least, may be congeneric with *Pseudochina*. Like the *N. holosericeus* it is hitherto unique, the single example from which I drew out my diagnosis having been captured by myself in the south of Grand Canary during April 1858.

### Genus 166 **ANOBIUM.**

Fabricius, *Syst. Ent.* 62 (1775)

#### 400 *Anobium velatum.*

*Anobium velatum*, Woll., *Ins. Mad.* 276 tab. 5 f. 3 (1854)

———, *Id.*, *Cat. Mad. Col.* 92 (1857)

———, *Id.*, *Ann. Nat. Hist.* (3rd series) vii. 18 (1861)

*Habitat* Lanzarotam et Gomeram, rarissimum

The distinctions between the present insect and the following one have been fully pointed out in my Paper on the *Anobiidae* of these islands. The only example of the *A. velatum* (which is not uncommon in Madeira) which I have myself detected at the Canaries was found, dead, in a house at Haria, in the north of Lanzarote, during the spring of 1859. A second, however, has lately been communicated by Dr. Crotch—who captured it in Gomera, during the spring of 1862.

#### 401 *Anobium villosum.*

*Anobium villosum*, Bonelli, *ined.*

———, Dej., *Cat.* 130 (1837)

———, Brullé, in Webb et Berth. (*Col.*) 60 (1838)

———, Woll., *Ann. Nat. Hist.* (3rd series) vii. 18 (1861)

*Habitat* Teneriffam, hinc inde in domibus, rarissime

The *A. villosum* (of southern Europe), which differs principally from the last species in the form of its rather smaller and more posteriorly-rounded prothorax, may perhaps have been naturalized in these islands from higher latitudes. At any rate I have as yet observed it only in houses in Teneriffe,—particularly (though very sparingly) at S<sup>ta</sup> Cruz. Nevertheless I took the remains of a single example in the house at the Agua Mansa likewise—which is certainly far removed from, at all events, the towns. The minor characters

which distinguish it, additionally, from the *A. velatum* have been fully pointed out in my paper on the Canarian *Anobiidae*

#### 402 *Anobium paniceum*.

- Dermestes paniceus*, *Linn*, *Fna Suec* 431 (1761)  
*Anobium paniceum*, *Steph*, *Ill Brit Ent* iii 340 (1830)  
 ———, *Woll*, *Ins Mad* 277 (1854)  
 ———, *Id*, *Cat Mad Col* 93 (1857)

*Habitat* in domibus Lanzarotæ, Canariæ, Teneiffæ et Gomeræ,

Clearly naturalized through the medium of commerce—being a species liable to importation, in farinaceous substances, throughout the civilized world I have taken it sparingly, in or about houses, in Lanzarote, Grand Canary, and Teneriffe, and I have examined a specimen which was found by Dr Crotch in Gomera

#### 403 *Anobium molle*.

- Dermestes mollis*, *Linn*, *Fna Suec* 415 (1761)  
*Anobium molle*, *Steph*, *Ill Brit Ent* iii 341 (1830)  
 ———, *Woll*, *Cat Mad Col* 93 (1857)

*Habitat* Palmam, mense Maio a D 1858 specimen unicum (mortuum) cepi

A single example of what I believe to be the common European *A. molle* was taken by myself, dead, from out of a cone of a *Pinus canariensis* in the Barranco above Sta Cruz in the island of Palma, during May 1858 Although considerably mutilated, I can detect nothing about it to warrant the suspicion that it is distinct from that species It occurs also, sparingly, around Funchal in Madeira

#### 404 *Anobium striatum*

- Anobium striatum*, *Oliv*, *Ent* ii 16 9 (1790)  
 ———, *Gyll*, *Ins Suec* i 291 (1808)  
 ———, *Woll*, *Ins Mad* 278 (1854)  
 ———, *Id*, *Cat Mad Col* 92 (1857)

*Habitat* in domibus Teneiffæ et Palmæ, haud frequens

This common European insect (which is rather abundant in Madeira, and which is evidently a mere importation into these islands) is decidedly scarce at the Canaries I have, however, taken it sparingly in houses both in Teneriffe and Palma, in the former of which it was found likewise by Dr Crotch

#### 405 *Anobium cryptophagoides*, n sp

*A. oblongo-ovatum*, rufo-brunneum, sat nitidum, grosse sericeo-pubescent, prothorace subconico (ad latera haud explanato-margi-

nato), æquali, convexo, subtuberculato-rugoso (vix punctato), elytris profunde suberenato-striatis, interstitiis depressis et parce punctulatis, antennis vix obscurioribus, articulis ultimis tribus haud valde elongatis —Long corp lin 1

*Habitat* ins Hierro, in loco quodam mox supra mare in regione "El Golfo" dictâ sito mense Februario a d 1858 exemplari unicum cepi

Of this minute *Anobium*, which has much the colour and *primâ facie* aspect of a *Cryptophagus*, I have seen hitherto but a single example—which was taken by myself, during February 1858, in a sandy lane at a very low elevation in the district of El Golfo, on the western side of Hierro. It is remarkable for its reddish-brown hue and rather shining and sericeous surface, for its oblong-ovate outline, for its prothorax being even and subconical and not at all margined (or expanded) at the sides, and for the last three joints of its antennæ being rather less elongated than is the case in the generality of the true *Anobia*

#### Genus 167 PTILINUS

Geoffroy, *Hist Abr des Ins* 1 65 (1764)

#### 406 *Ptilinus lepidus*, n sp

*P mas* opacus, fusco-niger, densissime et minute pubescens, prothorace postice inæquali dense et minute granulato et carinâ abbreviatâ lævi instructo, antice asperato, elytris (præsertim versus basin) paulo rufescentioribus, subpunctato-rugulosis, antennis pedibusque pallidioribus, illis longe flabellatis (flabellis nigrescentioribus)

*P fœm* nitidus, rufo-brunneus, glaber, prothorace postice cylindrico parce et minute punctulato, antice latiusculo convexo et valde asperato, elytris minutissime punctulato-subrugulosis, antennis pedibusque vix pallidioribus, illis serratis —Long corp lin (*mas*)  $1\frac{1}{2}$ —vix 2, et (*fœm*)  $1\frac{2}{3}$ — $2\frac{1}{2}$

*Habitat* Teneriffam et Palmam, in locis intermediis degens

The excessive dissimilarity of the sexes of this insect renders it absolutely necessary to give a separate diagnosis for each of them, since they have scarcely a single feature in common. In my Paper on the Canarian *Anobiadæ* I queried it as probably identical with the Madeiran *P cylindripennis*, of which I did not, at the time, happen to possess a type for comparison. A subsequent examination, however, of the two proves them to be unquestionably distinct, for although they do not differ materially in their *male* sex (which indeed, in both cases, has much the *primâ facie* aspect of the common European *P pectinicornis*), the *females* of the *P lepidus*, when closely inspected, will be seen to have nearly *all* their characters considerably

modified Thus, they have their entire surface more shining and *quite glabrous* (whereas that of the *cylindripennis* is very minutely, but densely, pubescent), their prothorax is larger, relatively wider anteriorly, more obtusely rounded (or less acuminate) in front, and delicately *punctulated* (instead of granulose) behind, and their elytra are rather more decidedly (though *most* minutely) punctulated, and apparently without even the faintest tendency to be longitudinally subcostate

Hitherto I have observed the *P lepidus* only in the intermediate elevations of Teneriffe and Palma,—namely at Taganana of the former, and (more abundantly) in an old pining at Galga, of the latter

## Fam. 41. BOSTRICHIDÆ.

### Genus 168 XYLOPERTHA \*

Guérin, *Ann de la Soc Ent de France, Bull* 17 (1845)

#### 407 *Xylopertha barbifrons*, n. sp

*X cylindrica*, fusco-picea, subnitida, pube flavesciente sericeâ demissâ grosse irrorata, capitis limbo longissime barbato, prothorace antice mucronibus maximis asperato et ibidem pilis tenuibus longissimis erectis obsito, postice parce granulato, elytris basin versus paulo pallidioribus, subseriatim punctatis (punctis postice magnis, antice paulatim minutissimis), ad apicem retusis, parte truncatâ utrinque nodulo parvo instructâ necnon per suturam elevatâ, antennis pedibusque testaceis, illarum clavâ tibisque subinfuscatis. —Long corp lin  $1\frac{3}{4}$

*Habitat* Palmam, mense Maio a d 1858 exemplar unicum haud procul a Galga deprehendi.

The present insect differs, *inter alia*, from the Madeiran *X barbata* in being more densely clothed with a *coarser* decumbent sericeous pile, in the hinder region of its prothorax being much less polished, and *distinctly granulose* (instead of most minutely punctulated), in the paler parts of its surface being darker, or more infuscated, in its forehead being still more densely pemicillated, and in its suture being more uniformly raised along the whole of the truncated portion at the apex of its elytra The single specimen from which the above

\* It appears that the *Xyloperthæ* (at any rate the European ones) have but *nine* distinct joints to their antennæ, and not ten as has been usually supposed. Consequently M. Mulsant's genus *Enneadesmus*, which was based solely on the former character, has to be suppressed, and the Madeiran insect which I described in 1860 (*vide Ann of Nat Hist*, 3rd series, v 359), under the name of *Enneadesmus barbatus*, must be regarded, therefore, as a *Xylopertha*

diagnosis has been compiled was captured by myself in the east of Palma (on the mountains between Galga and the sea), on the 24th of May 1858

Genus 169 **DINODERUS.**

Stephens, *Man Brit Col* 203 (1839)

408 **Dinoderus brunneus**

*D. cylindricus*, piceo-brunneus, fere opacus, ubique densissime et grosse rugoso-asperatus, breviter et parce sed in limbo longius fulvo-pubescent, prothorace antice subangustato et valde mucronato, postice dense granulato truncato, elytrorum granulis magnis sed vix subseriatim dispositis, antennarum clavâ tarsisque paulo magis testaceis — Long corp lin 2-2½

*Dinoderus brunneus*, *Woll, Ann Nat Hist* (3rd series) ix 440 (1862)

*Habitat* in pinetis Teneriffæ et Palmæ, truncos *Pin. canariensis* emortuos destruens

I am doubtful whether this *Dinoderus* is more, in reality, than a local phasis of the European *D. substriatus*,—from which it seems to differ merely in its rather smaller size, narrower outline, and browner hue, in the sculpture of its elytra being somewhat closer and not quite so coarse, and in its prothorax being relatively a trifle narrower in front, less dilated in the middle and more truncated at the base—the hinder angles being rather less rounded off. It seems to be exceedingly rare, or at all events local, being confined (so far as I have observed hitherto) to the rotten trunks of the *Pinus canariensis*, at intermediate and somewhat lofty elevations. In such positions I have taken it at the Agua Mansa in Teneriffe, and high up in the Barranco above S<sup>ta</sup> Cruz in Palma.

**Fam. 42. CIOIDÆ.**

Genus 170 **CIS.**

Latreille, *Préc des Caract Gén des Ins* 50 (1796)

409 **Cis lauri.**

*Cis lauri*, *Woll, Ins Mad* 282 tab v f 7 (1854)

— —, *Id, Cat Mad Col* 94 (1857)

*Habitat* in lauretis Teneriffæ, hinc inde sat vulgaris

The *C. lauri*, so common in the laurel-regions of Madeira, occurs in similar spots at the Canaries—where, however, it seems to be both more local and less abundant. Hitherto I have observed it only in the woods of Las Mercedes and the Agua Garcia, in Teneriffe,

but we may be almost certain that it will be found generally, wherever the remains of the old laurel-forests, which are fast disappearing, still exist. Teneriffan examples have also been communicated by Dr. Clotch.

### Genus 171 OCTOTEMNUS

Mellé, *Ann. de la Soc. Ent. de France*, (2<sup>ème</sup> série) vi 384 (1848)

#### 410 *Octotemnus opacus*.

*Octotemnus opacus*, Mellé, *loc. cit.* 386 (1848)

———, Woll, *Ins. Mad.* 283 (1854)

———, *Id.*, *Cat. Mad. Col.* 94 (1857)

*Habitat* in sylvaticis Teneriffæ et Palmæ, minus frequens

Like the *Ois larini*, the present insect abounds in Madeira, but is comparatively scarce, and also exceedingly local, at the Canaries. Hitherto I have observed it only in sylvan and subsylvan spots of the intermediate altitudes of Teneriffe and Palma,—namely at the Agua Garcia and the laurel-woods above Taganana of the former, and high up in the Barranco da Agua of the latter.

## Fam. 43. TOMICIDÆ

### Genus 172 TOMICUS.

Latreille, *Hist. Nat. des Ins.* iii 203 (1802)

#### 411 *Tomicus nobilis*

*T. cylindricus*, piceo-niger, subnitidus, pilis tenuibus longissimis erectis fulvescentibus præsertim in limbo obsitus, prothorace elongato, postice profunde punctato, antice valde asperato, elytris picescentioribus, profunde punctato-striatis, ad apicem subito et valde retusis, parte excavata dentibus lateralibus tribus (superiore maximo noduliformi), uno parvo antico et duobus vel tribus obscuris subconfluentibus posticis utrinque armata, femoribus tibisque rufo-ferrugineis, tarsis antennisque rufo-testaceis.

*Variat* (immaturus) colore omnino ferrugineo, necnon (forsan in sexu femineo) dentibus elytrorum apicalibus minus distinctis.—Long corp. lin.  $1\frac{1}{2}$ –2

*Tomicus nobilis*, Woll, *Ann. Nat. Hist.* (3d series) ix 441 (1862)

*Habitat* in pinetis Teneriffæ et Palmæ, lignum antiquum destruens

This large *Tomicus* is remarkable for the hinder portion of its prothorax being coarsely punctured (with the punctures distinct and well defined), for its elytra being more or less piceous and the head and prothorax piceous-black, whilst its legs are more rufescent, with their tarsi (like the antennæ) testaceous, and for its elytra being

very deeply punctate-striated, with the excavated portion at their apex bounded on either side by a large obtuse tooth, two acuter ones behind it, and two or three still smaller, obscure, and more or less subconfluent ones towards the apex, in addition to which there is a minute and sharp one *in front*, on each side of the suture. In some examples, however, which are perhaps the females, these teeth are altogether smaller and more confused. It seems to be confined to the rotten wood of the *Pinus canariensis*, beneath the loose bark of which it is locally abundant, in the intermediate elevations of Teneriffe and Palma. In such situations I have taken it at the Agua Mansa of the former, and in the Barranco above S<sup>ra</sup> Cruz of the latter.

I am far from certain, however, that the present *Tomicus* is in reality distinct from the Madenan *T. erosus*, from which it appears mainly to differ in its larger size and relatively broader outline, in its prothorax being rather more deeply punctured behind and just perceptibly narrower in front, in its elytra being usually more piceous or rufescent, and with the large punctures of their striae a *triple* more distant *inter se*, and in its tibiae being perhaps a little less spinulose externally.

#### 412 *Tomicus Saxeseni*.

*Bostichus Saxeseni*, Ratz, *die Forst-Insect.* 1 167 (1837)

*Tomicus Dohrni*, Woll, *Ins. Mad.* 290 (1854)

———, *Id.*, *Cat. Mad. Col.* 96 (1857)

*Habitat* Teneriffam et Palmam, rarissimus

The *T. Saxeseni*, which in Madeira seems to be confined principally to the laurel-woods of a high elevation, where it is often extremely abundant, would appear (so far as I have observed hitherto) to be very rare in these islands, and it is somewhat remarkable that the few examples of it which I have met with were beneath the bark of the *Pinus canariensis*. Under such circumstances I have taken it, very sparingly, in Teneriffe, and in the Barranco above S<sup>ra</sup> Cruz in Palma.

#### Genus 173 *XYLOTERUS*

Erichson, in *Wieg. Archiv.* 11 60 (1836)

Although I have but a single example (and that, I believe, a female one) to judge from, I nevertheless refer the insect described below to *Xyloterus*, since in the exact proportions of its *quadriarticulate* funiculus, as well as in the shape of its compressed and *extremely solid* club, it agrees precisely with (at all events the corresponding sex of) that genus. Its feet, too, have their antepenultimate joint nearly simple, whilst its tibiae (which are a good deal widened) have their

outer edge rounded and minutely serrated, as in the *Xyloterus*. Nevertheless, in its very much smaller size and concolorous hue, as well as in its much longer prothorax, which is considerably more produced in front, and its total freedom from a visible scutellum, it recedes from *Xyloterus*, and perhaps might almost seem to constitute the type of an allied Group. In the absence, however, of further material, and considering the essential points which it possesses in common with *Xyloterus*, I prefer treating it as an exponent of that genus. The only other genera of the *Tomocidae* which have, so far as I am aware, a 4-jointed funiculus are *Cryphalus* and *Leperathrum*,—from both of which it differs far *more*, in its primary details, than it does from *Xyloterus*.

#### 413 *Xyloterus longicollis*, n. sp.

*X.* breviter cylindricus, crassiusculus, rufo-ferugineus, subnitidus, pilis erectis subcinereis sat parce obsitus, prothorace elongato, asperato (etiam postice vix punctato), elytris paulo rugulosis et leviter seriatim punctatis, ad apicem obtusis sed integris, antennis pedibusque clarioribus, tibus latis, extus minute spinuloso-serratis.—Long corp. lm 1.

*Habitat* Fuerteventuram; sub stercore camelineo ad Rio Palmas d. 6 Apr. a. d. 1859 exemplar unicum collect.

The unique specimen from which the above diagnosis has been compiled was captured by myself, on the 6th of April 1859, together with numerous other insects, from beneath the refuse of a camels' stable in the Rio Palmas of Fuerteventura. It is probable, however, that its presence in a position so anomalous for a member of this family was merely accidental.

#### Genus 174 **CRYPHALUS**

Erichson, in *Wieg. Archiv*, ii 61 (1836)

#### 414 *Cryphalus aspericollis*

*Cryphalus aspericollis*, *Woll. Ann. Nat. Hist.* (3d series) v 365 (1860)

*Habitat* Teneriffam in caulis emortuis lignoque antiquo degens

This very minute wood-borer, which is not uncommon in Madeira, occurs also at the Canaries. Hitherto, however, I have detected it only in Teneriffe, namely (sparingly) near St<sup>a</sup> Cruz, and (more abundantly) above the Puerto of Orotava, in the latter of which localities I captured it, during May 1858, from out of the dead stalks of a *Geranium* in the garden of the "Dehesa". From its diminutive size it is extremely likely to escape observation, but there is reason to believe that its geographical range is by no means restricted to these imme-

diates Atlantic Groups, for a single example of it was found by Mr Bewicke at Ascension, and although it was probably imported accidentally into that island, there is nothing to warrant the suspicion (but quite the reverse) that it had been brought there from either the Canaries or Madeira

### Genus 175 **APHANARTHURUM**

Wollaston, *Ins Mad* 292 tab vi f 2 (1854)

For the diagnoses of *nine* out of the eleven *Aphanarthra* enumerated below I must refer to a Paper on the members of this curious *Euphorbia*-infesting genus, published in the 'Annals of Nat Hist,' and which I have cited under each of them, though, at the same time, the few diagnostic observations which I here add may perhaps, in some instances, almost suffice, practically, for identifying them. It will be seen that *two* of the representatives were not included in that Memoir,—one of them (the *A. armatum*) having escaped my observation amongst a mass of specimens, of the *A. bicinctum* and *affine*, whilst the other (the *A. concolor*) I had failed until recently to recognize as an *Aphanarthrum* at all

#### § I *Pronotum antice productum, caput fere occultans*

A *Pronotum ad apicem vpsissimum tuberculis minutis armatum*

#### 415 *Aphanarthrum* Jubæ.

*Aphanarthrum* Jubæ, *Woll*, *Ann Nat Hist* (3rd series) v 164 (1860)

*Habitat* Lanzarotam, in ramis *Euphorbiæ regis-Jubæ* desiccatis prope oppidum Haria mense Martio a d 1859 sat copiose repertum

The comparatively large size and very long and coarse pubescence of this *Aphanarthrum*, combined with the lurid apex of its prothorax, which is armed with two tolerably distinct tubercles (besides one or two smaller collateral ones) at its extreme point, and its pale-testaceous elytra, which are ornamented with two large, black, zigzag transverse fasciæ (the anterior one of which is much developed, and more or less double, or looped, in the middle), will sufficiently characterize it. Hitherto I have observed it only in the north of Lanzarote, where, during March 1859, I captured it in considerable abundance from out of some dried stems of the *Euphorbia regis-Jubæ* which had been piled up for burning, at Haria

#### 416 *Aphanarthrum* armatum

*A. nigro-fuscum*, pilis brevibus demissis dense vestitum, prothorace alutaceo et minute punctulato, apice producto acutiusculo vix sub-

lurido et ibidem tuberculis duobus spiniformibus porrectis subaproximatis instructo, elytris dense sed leviter subseuiatim punctatis, fasciâ magnâ transversâ testaceâ mox pone basin ornatis, antennis pedibusque infuscato-testaceis —Long corp lin vix  $\frac{3}{4}$

*Aphanarthrum armatum*, Woll, *Trans Ent Soc Lond* (3rd series) 1 167 (1862)

*Habitat* Lanzarotam, duobus speciminibus a meipso deprehensis

When preparing my Paper on the *Aphanarthra* of these islands I overlooked, as has been already stated, the present species,—having (without accurate examination) regarded the two specimens from which the above diagnosis has been compiled as merely immature ones of the *A. biceinctum*. A more careful inspection of them, however, shows that (amongst other characters) they have the extreme apex of their pronotum (which is not at all thickened or recurved) armed with about four tubercles, of which the inner pair are comparatively elongated, acute, somewhat spiniform, and subapproximated. Indeed in this respect they approach the *A. Jubæ*, nevertheless, apart from the different shape of these minute projections (the inner two of which are *relatively* longer, more porrect, and placed closer together), the *A. armatum* may be immediately known from that insect by its very much smaller size and by its considerably shorter, finer, and more decumbent pubescence, by its alutaceous prothorax (which is rather acuter, and less decidedly dilated, at its extreme apex), by its entire punctation being closer and less coarse, and by its elytra (so far, indeed, as I am able to judge from the two examples now before me) being ornamented by merely a large transverse pallid fascia immediately behind their base. It was taken by myself in Lanzarote (I believe, in the vicinity of Hara), along with the *A. Jubæ*, *affine*, and *biceinctum*.

B *Pronotum ad apicem ipsissimum haud (rarius via) tuberculatum, sed ibidem anguste plus minus incrassatum*

#### 417 *Aphanarthrum glabrum*

*Aphanarthrum glabrum* Woll, *loc cit* 167 (1860)

*Habitat* in Gomeia et Hierro, rarissimum

The rather small size and comparatively *glabrous* surface of this little *Aphanarthrum* (the pubescence of which is so excessively short and minute as to be quite untraceable except beneath the microscope), in conjunction with its alutaceous and densely (though delicately) punctulated prothorax, the extreme apex of which is somewhat lurid and has occasionally the faintest possible indications of

being studded with two just perceptibly elevated points, or tubercles, will serve to characterize it. Its elytra (which are testaceous, and ornamented, when the insect is mature, with two exceedingly black transverse dentate fasciæ) are substrated, and closely and finely punctulated,—the punctures, however, having but a slight tendency to be arranged in longitudinal rows. Hitherto I have myself observed it only in Hierro, where I captured it sparingly, from out of dead *Euphorbia*-stems, during February 1858, but I have examined two more individuals which were found by Dr. Crotch, during the spring of 1862, in Gomera.

#### 418 *Aphanarthrum bicolor*

*Aphanarthrum bicolor*, Woll, loc cit 165 (1860)

*Habitat* in Teneriffe, Gomera, Palma et Hierro, *Euphorbias* emortuas destruens

The present beautiful *Aphanarthrum* (which occurs also in Madeira) is not uncommon, in dead *Euphorbia*-stems, in Teneriffe, Gomera, Palma\*, and Hierro, in the last of which it was found likewise by Mr Gray. It may be easily known by its whitish-testaceous hue, and the number of dark patches and broken fasciæ with which it is ornamented, and by its elytra being rather more shining than is the case in the generality of the species, somewhat diaphanous (or subhyaline), most lightly sculptured, and nearly unpubescent—being studded with only a few distant and stiff erect hairs. It is probably universal throughout the archipelago, nevertheless, as yet, I am unable to record it except for Teneriffe, Gomera, Palma, and Hierro.

#### 419 *Aphanarthrum affine*

*Aphanarthrum affine*, Woll, loc cit 166 (1860)

*Habitat* in Lanzarota, Fuerteventura, Canaria et Gomera, vulgaris

When viewed beneath a high magnifying power, the sculpture of the elytra of this insect (the punctures being more distant *inter se*, and more evidently disposed in longitudinal rows) would almost suffice to separate it from the other *Aphanarthra* here enumerated. In minor particulars, its prothorax, which in matured specimens is generally brownish-black with the apex (the extreme margin of which is a good deal incrassated) lurid yellow, is rather coarsely

\* In my Paper on the *Aphanarthra* I have stated that I captured the *A. bicolor* in Palma, but (through a typographical error) the island "Gomera" is recorded, instead of Palma, in the *habitat* which immediately follows the diagnosis. However, it has subsequently been taken in Gomera also by Dr. Crotch.

alutaceous and most minutely punctulated, its elytra are pale-testaceous, with the two ordinary darker dentate fasciæ strongly expressed (the anterior one being deeply *looped*, or double, in its central portion, whilst the hinder one is considerably removed from the apex), and its entire surface is studded (though not very densely so) with rather long and coarse erect hairs. It is the common species of Lanzarote and Fuerteventura, where it often swarms in the stems and branches of the decayed Euphorbias, and it is likewise pretty abundant in Grand Canary, whilst in Gomera it was found by Dr Crotch.

In Lanzarote it was taken also by Mr Gray, and, on the 28th of March 1859, I captured it even on the little uninhabited island of Lobos, off the extreme north of Fuerteventura, where the Euphorbias attain a most gigantic size\*

#### 420 *Aphanarthrum piscatorum*.

*Aphanarthrum piscatorum*, Woll, *loc cit* 166 (1860)

*Habitat* in Teneriffa, Gomera, Palma et Hierro, ramos Euphorbiarum emortuos (præsertim *E. piscatoriæ*) perforans

Whilst the *A. affine* is more particularly abundant throughout the eastern islands of the archipelago, the present somewhat insignificant little species would appear to be exceedingly common in the central and western ones. In Teneriffe, Gomera (where it was found by Dr Crotch), Palma, and Hierro it is locally abundant, occasionally teeming in the rotten *Euphorbia*-stems—principally those of the *E. piscatoria* (under which circumstances it occurs likewise at Madeira). It may be known by its rather small size and by the dull- or brownish-testaceous hue of its elytra—the darker fasciæ of which are not very well defined, the hinder one being more especially suffused and reaching consequently almost (or entirely) to the extreme apex. Its elytra, which are closely punctured, have their sides perhaps *just perceptibly* less parallel than is the case in the other species, and its entire surface is densely beset with rather soft and suberect hairs.

#### 421 *Aphanarthrum bicinctum*

*Aphanarthrum bicinctum*, Woll, *loc cit* 165 (1860)

*Habitat* in Lanzarota et Fuerteventura sat vulgaris, necnon in Canaria et Teneriffa minus frequens

\* The *A. affine* is a good deal allied, in general *facies*, to the *A. euphorbiæ* of the higher elevations of Madeira, it is, however, on the average, a little smaller than that insect: its pubescence is longer, its prothorax is relatively more developed and less acuminate in front, and the punctures of its elytra are larger, fewer, and more decidedly arranged in longitudinal rows.

The dark brownish-yellow hue of the elytra of this species, which has usually both of its fasciæ well expressed (the anterior one being largely developed), together with the apex of its prothorax being almost, or even entirely, dark, and its surface clothed with somewhat long and erect hairs, will serve to discriminate it. It is rather common in Lanzarote and Fuerteventura, where it occurs in company with the *A. affine*, in Grand Canary it is scarcer, and in Teneriffe still more so, so that it would seem to be more particularly characteristic of the eastern portion of the archipelago. The few examples which I have taken in Grand Canary and Teneriffe are a trifle larger than those from Lanzarote and Fuerteventura, and at first sight might easily be mistaken for the *A. canariense*. Nevertheless, on closer inspection, they will always be seen to have their pubescence longer and more erect, and their pronotum almost (or even entirely) concolorous at its apex; their elytra, too, are generally a shade darker, with the sculpture less dense, and with the fasciæ (although occasionally suffused) more developed—the anterior one extending to the outer margin, and the hinder one being less often broken in the centre (and even when resolved forming two large and conspicuous patches). In its habits, also, it is not quite the same, since it infests the Euphorbias promiscuously, and is not partial like that insect to the *E. canariensis* especially.

#### 422 *Aphanarthrum canariense*

*Aphanarthrum canariense*, Woll., loc. cit. 164 (1860)

*Habitat* in Canaria, Teneriffa, Gomera, Palma et Hierro, plantas *Euphorbiæ canariensis* putridas destruens

The rather broad and shortly-cylindric outline (in proportion to its size) of this *Aphanarthrum*, in conjunction with its very abbreviated pubescence, the brightly lurid apex of its prothorax (which has the extreme anterior margin perceptibly thickened), and the dense (though not very deep) sculpture, and somewhat dusky-yellow hue, of its elytra (which are usually, nevertheless, a shade clearer than those of the *A. bicornutum*), will sufficiently characterize it. Its fasciæ are more or less transversely abbreviated—the anterior one (which is thick, and much developed, in the centre) seldom reaching to the lateral margins, whilst the hinder one is more or less obsolete, being always broken in the middle, and generally represented by a detached central dash at a short distance from the apex of each of the elytra.

In its habits, the present species would seem to be almost (if not

indeed entirely) confined to the decayed stalks of the *Euphorbia canariensis*, and I have consequently observed it in those islands only where that curious plant still remains—that is to say, in *all* of them except Lanzarote and Fuerteventura, in which (if indeed it ever existed there at all) I do not remember to have ever met with the *E. canariensis*. But in Grand Canary, Teneriffe, Gomera, Palma, and Hierro I have captured the species, more or less abundantly. In Teneriffe it was found likewise by Dr Crotch.

§ II *Pronotum antice minus productum, caput (longiusculum, fere subrostratum) haud occultans*

#### 423 *Aphanarthrum luridum*

*Aphanarthrum luridum*, Woll., loc. cit. 163 (1860)

*Habitat* Teneriffam et Gomeram, in plantis *Euphorbiae canariensis* putridis degens

The present species and the two following ones differ from the rest of the *Aphanarthra* here enumerated in having their pronotum only slightly produced in front, so that their heads (which are somewhat longer and more rostrate) are less concealed from view. In their external details, however, they all three differ very considerably *inter se*,—the *A. luridum*, in its comparatively large size and testaceous colour, being, to all appearance (*primâ facie*), a true *Aphanarthrum*, whilst the second, in its diminutive bulk, dark-brown surface, and less parallel outline, has a totally different aspect, and the third, which is blacker still and relatively more elongate, recedes so completely, both in its *facies* and *habits*, from the *Aphanarthra*, that, were it not for the exact form of its antennæ with their biarticulated funiculus, I should have totally failed to recognize it as a member of this group.

In its minor details, and apart from its less produced prothorax and rather square, subrostrate head, the *A. luridum* may be known by its pale lurid-testaceous hue,—a longitudinal dash on the hinder disc of each of its elytra (representing the anterior fascia), the dorsal line of its prothorax, a spot on either side of the latter, and a suffused portion in front being alone more or less dark. It is sparingly studded with long and erect hairs, its punctuation is fine, and (which is one of its most distinctive features) its elytra are suddenly shortened, or slightly *truncated obliquely*, at their apex.

The *A. luridum* seems to be confined (so far as I have observed hitherto) to the rotten plants of the *Euphorbia canariensis*,—in which situations I have taken it on the mountains above S<sup>ta</sup> Cruz of Tene-

riffe (in the direction of Las Mercedes), and (more abundantly) on a hill-top in Gomera, immediately to the north-west of San Sebastian. In this latter locality it was found also by Mr Gray, and in Teneriffe it has been captured subsequently by Dr Crotch.

#### 424 *Aphanarthrum pusillum*

*Aphanarthrum pusillum*, Woll., loc. cit. 167 (1860)

*Habitat* Canariam, Teneriffam et Gomeram, in eisdem locis ac præcedens, ramos *Euphorbiæ canariensis* putridos destruens

This curious little insect may be known from all the *Aphanarthra* which precede it by its very minute size and uniformly dark-brown hue, by its triangular head and laterally rounded prothorax, and by its lightly sculptured surface, which is sparingly beset with soft erect pile. Like the (comparatively gigantic) *A. luridum*, it appears to be peculiar to the rotten stalks of the *Euphorbia canariensis*, in which situations I have taken it, in company with that species, in the two localities above alluded to—of Teneriffe and Gomera, as also in the great crater of the Bandama mountain, in Grand Canary. In Teneriffe it was found likewise by Dr Crotch.

#### 425. *Aphanarthrum concolor*, n. sp.

*A. nigrum* vel subfusco-nigrum, subnitidum, pilis erectis et demissis fulvescenti-cinereis obsitum, prothorace distincte punctato et (oculo fortiter armato) minute reticulato, elytris striato-punctatis, antennis testaceis, pedibus piceo-testaceis—Long. corp. lin. vix  $\frac{2}{3}$

*Habitat* Teneriffam et Palmam, sub cortice *Pini canariensis* degens

As already implied, the present diminutive insect (which, however, is not quite so small as the *A. pusillum*) is so aberrant as an *Aphanarthrum* that it is with reluctance I am compelled to regard it as a member of that group. In its uniformly dark surface (which, except occasionally from immaturity, is scarcely at all diluted in hue), as well as in its general contour and rather distinct sculpture, it has much the appearance of an excessively minute *Hylastes*, whilst in its habits, on which I lay far greater stress, it recedes entirely from the whole of the preceding species, whose exclusive attachment to the various *Euphorbias* is one of their most remarkable peculiarities. Nevertheless, after a careful examination of its antennæ, they seem to me to be moulded on precisely the same type as those of the normal *Aphanarthra*\*, nor is there any difference in its tarsi that I can

\* As stated in my Paper "on the *Euphorbia*-infesting Coleoptera of the Canaries," the funiculus of *Aphanarthrum* is not distinctly more than biarticulate. There may possibly be a third (excessively minute) joint which is rendered in-

detect so that I have no option but to treat it as congeneric with the ten insects just enumerated. But having hitherto looked upon the *Aphanarthra* as essentially of *Euphorbia*-infesting propensities, I must confess that I am somewhat loath to associate with them a species of another mode of life, and (in the majority of its characters) of a very opposite aspect.

The *A. concolor*, so far as I have observed hitherto, is confined to the rotten trunks of the *Pinus canariensis*, of intermediate and rather lofty elevations—beneath the dead bark of which I have taken it at the Agua Mansa in Teneriffe, and in the Barranco above S<sup>ta</sup> Cruz in Palma.

### Genus 176 TRIOTEMNUS (nov. gen.)

*Corpus, antennæ et pedes fere ut in Aphanarthro, sed funiculo distincte 3-articulato, articulis 2<sup>do</sup> et 3<sup>io</sup> parvis (nec minutissimis), inter se æqualibus, capitulo solidissimo compresso (nec 4-annulato), elytris apice subretusis (nec omnino integris), colore obscuro (ut in Tomcidis typicis), nec læte variegato*

*A. τρεῖς, tres, et τέμνω, seco*

Although unwilling to erect a genus for the reception of a unique insect which has nothing anomalous in its structure, yet the present species is so completely removed from *Aphanarthrum* (the only other group, I believe, except *Hypothenemus*, as yet enunciated, in the *Tomcidæ*, with a professedly 3-jointed funiculus) that I am compelled to separate it therefrom. As above defined, the funiculus in *Triotemnus* is very conspicuously triarticulate (whereas in *Aphanarthrum* it seems doubtful whether that organ has in reality more than two joints\*), the second and third joints being comparatively distinct, and of equal dimensions, and the club (instead of being quadriarticulate) is extremely solid and compressed, moreover the former is

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visible from the *oblique* implantation of the funiculus into the club (for I believe that I can just detect one in, at all events, the Madeiran *A. euphorbiæ*), nevertheless, even under the highest power of the microscope, I cannot satisfy myself that it exists in the generality of the species. In the figure given of the *A. euphorbiæ* in my 'Ins. Mad,' this infinitesimal extra articulation is made very much too conspicuous.

\* *Vide* the observations (Trans. Ent. Soc. Lond., 3rd series, 1, 165) in my Paper "on the *Euphorbia*-infesting Coleoptera of the Canary Islands," where I implied that I was doubtful whether the funiculus of *Aphanarthrum* could be regarded, after all, as more than biarticulate, for although in my original diagnosis of the group (Ins. Mad. 292) I affirmed that portion of the antennæ to be 3-jointed, and although I still think that I am able to detect a third, infinitesimal joint in the particular species (the *A. euphorbiæ*) on which the genus was established, yet I have been so completely unable to satisfy myself of the presence of more than two articulations in the funiculi of any of the *Canarian Aphanarthra*, that I am half inclined to believe that the supposed additional one in the Madeiran *A. euphorbiæ* may perhaps be more apparent than real.

implanted into the axis of the latter in the ordinary way, and not obliquely. The elytra, also, instead of being entire, have a faint tendency to be lopped-off at their apex, as in *Tomiscus*, and the colour, instead of being variegated, is of the ordinary kind for the members of this family.

#### 426 *Triotemnus subretusus*, n. sp.

*T. nigro-piceus* elytris piceis, nitidus, cylindricus postice vix latior, pilis longiusculis suberectis cinereis parce obsitus, prothorace longiusculo, subconico, parce et sat profunde punctato (antice haud asperato), elytris profunde rugoso-punctatis (nec striatis), punctis haud sed pilis evidentius seriatim dispositis, ad apicem subietus, antennis pedibusque piceo-testaceis.—Long corp. lin 1.

*Habitat* Gomeiam, a Dom Crotch tempore vernali a. d. 1862 semel captus.

Apart from the structural peculiarities of its funiculus and club already referred to, the present insect (which has much the appearance, *primâ facie*, of an ordinary, though minute, *Tomiscus*) may be known by its rather shining and deeply punctured surface (particularly of the elytra, where the punctures are *not* disposed in longitudinal rows), and by its being sparingly beset all over with rather long, coarse, and partly suberect, cinereous hairs. The unique specimen described from was captured by Dr. Crotch in Gomera during the spring of 1862, and has by him been presented to the collection of the British Museum.

#### Genus 177 *LIPARTHURUM*

Wollaston, *Ins. Mad.* 294 [script *Leiparthrum*] (1854)

#### 427 *Liparthrum bituberculatum*

*Leiparthrum bituberculatum*, Woll., *Ins. Mad.* 297 tab. vi. f. 3 (1854)

—, *Id.*, *Cat. Mad. Col.* 97 (1857)

*Habitat* Teneriffam, præsertim in sylvaticis et editionibus, rarissimum.

The present insect, which is not uncommon in the sylvan districts of Madena, and which may be known from the *L. curtum* by its *relatively* somewhat narrower and more cylindric outline, rather darker hue, slightly longer antennæ, more developed mandibles, and by the pustules on the anterior portion of its pronotum being usually more numerous and coarse, is decidedly rare in these islands, where it appears to occur at intermediate and lofty elevations. I have taken it hitherto only in Teneriffe,—namely, in the wood of the Agua Garcia, and (though merely a single specimen) on the Cumbre

above the Agua Mansa (at an elevation of more than 7000 feet above the sea) The individual from the latter locality is altogether a little darker than those from the former, and has its prothoracic tubercles a trifle more evident, but I can detect nothing about it to warrant the suspicion that it is specifically distinct. A Teneriffan example has also been communicated by Dr Crotch

#### 428 *Liparthrum curtum*

*Leiparthrum curtum*, Woll, *Ins Mad* 298 (1854)

———, *Id*, *Cat Mad Col* 97 (1857)

*Habitat* insulas Canarienses, in Gomera solâ adhuc haud detectum

The *L. curtum*, which likewise occurs in Madeira, and (on the average) at a rather lower elevation than the *bituberculatum*, is almost certainly *universal* at the Canaries,—though I did not happen to meet with it in Gomera, during our short visit to that island but in Lanzarote, Fueniteventura, Grand Canary, Teneriffe, Palma, and Hierro I have captured it, more or less abundantly. It is found more particularly beneath the old and loosened bark of palings, gates, &c, and in the dead *Euphorbia*-stems, and it is, apparently, less strictly sylvan in its habits (or, at all events, less peculiar to the laurel-districts) than the last species. It may be known from it by its outline being *relatively* rather shorter and broader, by its paler hue, and by its antennæ, mandibles, and prothorax being a trifle more developed,—the last, also, having the pustules of its anterior portion considerably smaller, and indeed often nearly imperceptible.

#### 429 *Liparthrum inarmatum*.

*Leiparthrum inarmatum*, Woll, *Ann Nat Hist* v 364 (1860)

*Habitat* Lanzarotam, Canariam, Teneriffam, Gomeram et Palmam, ramos *Euphorbiarum* emortuos parce destruens

This little *Liparthrum*, which seems to be peculiar to the branches and stems of the dead *Euphorbias*, and which (like the last two species) occurs also in Madeira, may be known by its short and posteriorly-obtuse outline, by its prothorax being a good deal developed, though rather acuminate in front, and quite free from anterior pustules, or tubercles, and by its elytra being somewhat wide, and suddenly truncated, at their apex, very deeply striate-punctate (the punctures being large and conspicuous), with their interstices perceptibly elevated, and with their pubescence comparatively long (especially behind) and very decidedly arranged in longitudinal rows. Like the *L. curtum*, it will probably be found to be universal through-

out the archipelago,—its *Euphorbia*-infesting habits rendering this the more certain, nevertheless hitherto I happen to have met with it only in Lanzarote, Grand Canary, Teneriffe, and Palma,—though I have examined two specimens which were found by Dr Crotch in Gomera

#### 430 *Liparthrum* Lowe.

*Liparthrum* Lowe, *Woll, Trans Ent Soc Lond* 1 174 (1862)

*Habitat* Teneriffam et Gomeram, in ramis Euphorbiarum emortuus degens.

This excessively minute wood-borer was detected by the Rev R T Lowe, in dead *Euphorbia*-stems, near Garachico, in the north of Teneriffe, during April 1860. In the diagnosis of it, given in my Paper (cited above) “on the *Euphorbia*-infesting Coleoptera of the Canaries,” I have stated that “it is not only smaller than the smallest examples of the *maritimum*, but it is usually of a blacker (and quite concolorous) hue, of a strictly cylindric outline (being neither expanded nor *subtruncate* posteriorly), with its prothorax shorter and sinuated along the extreme base, and with its elytra (the interstices of which are *not* raised) less deeply punctured and without any *additional* setæ at their apex. Its limbs also are considerably darker than is the case in that insect. Its structural characters are quite those of *Liparthrum*, the proportions of its 4-jointed funiculus and feet being precisely similar to what obtains in the other members of the group. Its fore tibiæ, however, are not altogether unarmed, there being two short, obtuse teeth on their outer edge.” It occurs likewise in Gomera, where a single example was found by Dr Crotch, and we may expect it, therefore, to be pretty general amongst the decayed *Euphorbias*.

### Fam. 44. HYLESINIDÆ.

#### Genus 178 HYLESINUS

Fabricius, *Syst Eleu* 11 390 (1801)

#### 431 *Hylesinus* indigenus, n sp

*H* ovalis, convexus, niger, pilis robustis (fere squamis) demissis fulvescentibus vestitus, prothorace subconico, per basin ipsissimam bisinuato, subopaco, leviter et obscure punctato sed utrinque asperato, elytris vix nitidioribus, leviter et obscure seriatim punctatis sed ad basin asperatis, antennis rufo-testaceis.—Long corp lin 1

*Habitat* in Hieno, sub cortice lauri cujusdam antiquæ laxo emortuo in regione “El Golfo” dictâ Februario a d 1858 repertus

I have, unfortunately, but a single individual of this insect to judge

from, which was extracted, dead and mutilated, from out of an old laurel, the decayed portions of which were completely perforated with its burrows, in the wooded district of El Golfo, on the western side of Hierro. Although it has merely the scape of one of its antennæ remaining, I have little doubt nevertheless, from its convex, ovate body and general aspect, as well as from the peculiarity of its sculpture (the extreme base of its elytra, and either side of its *subconical* prothorax, being coarsely asperate, or mucronated), that it is a true *Hylesinus*, and I have therefore treated it accordingly. And if such should be the case (of which I feel pretty confident), it is of the greatest importance that its imperfect condition should not prevent me from admitting it into the present Catalogue, it being the only veritable *Hylesinus* which has hitherto been detected in *any* of these Atlantic islands. Moreover, from the extent to which its devastating powers were traceable in the old tree from whence my example was taken, there is reason to believe that it must play a significant part amongst the Xylophagous Coleoptera of (at any rate a portion of) the Canarian Group, but as our sojourn in Hierro was both brief and during the month of February (when the insects of this Family are necessarily difficult to procure), I was unable to obtain specimens in a more satisfactory state.

### Genus 179 HYLURGUS

Latreille, *Gen. Crust. et Ins.* ii 274 (1807)

#### 432 *Hylurgus ligniperda*.

*Bostrichus ligniperda*, *Fab., Ent. Syst.* i ii 367 (1792)

*Hylurgus ligniperda*, *Erich., Wiegmann Archiv*, ii 52 (1836)

—, *Woll., Ins. Mad.* 302 (1854)

—, *Id., Cat. Mad. Col.* 99 (1857)

*Habitat* in pinetis Teneriffæ et Palmæ, truncos *Pin. canariensis* destruens

The *H. ligniperda*, which occurs throughout the whole of Europe, and which has become naturalized in the fir-woods of Madeira, although extremely local is far from uncommon in certain situations at the Canaries. Hitherto I have observed it only in Teneriffe and Palma, but it will probably be found wherever the remains of the old Pinals still exist,—that is to say, in all the islands except Lanzarote and Fuerteventura. I have taken it from beneath the rotten bark of the *Pinus canariensis* at the Agua Mansa, and in the Pinal above Ycod el Alto, in Teneriffe, as also, in similar situations, in the Barranco above Sta Cruz of Palma.

Genus 180 **HYLASTES.**Enichson, in *Wiegman Archiv*, II 47 (1836)433 **Hylastes Lowe**Hylastes Lowe, *Parva, Ann Nat Hist* (3rd series) VIII 211 (1861)*Habitat* Teneriffam et Palmam, in eisdem locis ac præcedens, hinc inde vulgaris

This insect appears to have exactly the same range as the preceding one, and will probably be found to be equally universal throughout the scattered remains of the ancient Pinals, wherever such still exist. Nevertheless, up to the present time, I have observed it only in precisely the same spots as that insect,—namely, at the Agua Mansa, and in the fir-woods above Ycod el Alto, of Teneriffe, and in the Barranco above Sta Cruz in Palma. In Teneriffe it was captured also by Dr Crotch. It is closely allied to the European *H. ater*, but is smaller, with its punctation much finer and denser, and with the unsculptured line down the middle of its pronotum more distinct.

**Fam. 45. CURCULIONIDÆ.**

(Subfam. COSSONIDES\* )

Genus 181 **EREMOTES**Wollaston, *Trans Ent Soc Lond* (new series) V 364 (1861)434 **Eremotes crassicornis.**Hylurgus crassicornis<sup>2</sup>, Brulle, in *Webb et Berth (Col)* 71 (1838)Eremotes crassicornis, Woll, *Trans Ent Soc Lond* V 365 pl 18 f 1 (1861)*Habitat* in pinetis Canariæ, Teneriffæ et Palmæ, rarissimus, truncos *Pinus canariensis* antiquos emortuos perforans

This curious insect, so remarkable for its exceedingly round and prominent eyes, enormously thickened antennæ, with their reduced capitulum and the greatly abbreviated second joint of their funiculus, which is almost buried within the enlarged basal one, as well as for the small spine with which the inner apex of its tibiæ is armed, seems to be confined to the rotten trunks of the *Pinus canariensis*, at intermediate and lofty elevations. It will probably be found wherever

\* For the exact details (structural and diagnostic) of the various members here enumerated of this Subfamily of the *Rhynchophora*, I must refer to my Paper 'on the Atlantic *Cossonides*,' published in the fifth volume (new series) of the 'Transactions of the Entom Soc of London.'

the remains of the old Pinals still exist, nevertheless hitherto I have observed it only on the mountains above San Bartolomé (in the district of Tarajana) of Grand Canary, at the Agua Mansa in Teneriffe, and in the Barranco above Sta Cruz in Palma,—in the last of which islands it was captured also by Dr Crotch. Its cylindric outline, intensely black hue, and deeply sculptured surface give it much the appearance at first sight of certain members of the *Hylesinidæ*, nevertheless, apart from all minor distinctions, the structure of its *undilated, apically uncinatæ, and externally simple* tibiæ will immediately remove it from the whole of those groups

### Genus 182 RHYNCOLUS

(Creutzer) Germ, *Ins Spec* 307 (1824)

#### 435 *Rhyncolus crassirostris*

*Rhyncolus crassirostris*, Woll, *Trans Ent Soc Lond* v 367 pl 18<sup>o</sup> f 3 (1861)

*Habitat* in montibus Canariæ Grandis, pinos emortuas destruens

The few examples which have come hitherto beneath my notice of this insect I captured, during April 1859, from out of the trunk of an old *Pinus canariensis*, on the ascent to the Pinal above San Bartolomé, in the mountains of Grand Canary. It would appear, therefore, to have the same habits as the *Enemotes crassicornis*, and may consequently be expected to occur in spots where the latter, and other pine-infesting species, are found. Its distinctions from the European *R. truncorum*, which at first sight it somewhat resembles, may be gathered from a reference to my Paper cited above

### Genus 183 PHLÆOPHAGUS.

Schönherr, *Gen et Spec Curc* iv 1047 (1838)

#### 436 *Phlæophagus caulum*

*Phlæophagus caulum*, Woll, *Trans Ent Soc Lond* v 370 (1861)

*Habitat* Lanzarotam et Fuerteventuram, in truncis ramisque Euphorbiarum emortuis degens

So far as observed hitherto, the present *Phlæophagus* seems to be peculiar to the dead *Euphorbia*-stems of Lanzarote and Fuerteventura, where it is occasionally very abundant, and in the former of which it was first captured by Mr Gray and myself, at Haria, during January 1858. It may be known by its deeply sculptured surface (the punctures of its prothorax, particularly in the Lanzarotan specimens, being exceedingly large) and by its obsolete scutellum, the latter being

usually quite untraceable even beneath the highest powers of the microscope

#### 437 *Phlécephagus laurineus*

*Phlécephagus laurineus*, Woll, *Trans Ent Soc Lond* v 371 (1861)

*Habitat* in sylvaticis editoribus Teneriffæ, Gomæræ et Palmæ, sub cortice laurorum erodens

Although approaching each other at first sight, the present *Phlécephagus* and the last one will be seen, on a closer inspection, to be totally distinct. Their habits, also, are quite different, for whilst the *P. caulium* is apparently peculiar to the decayed *Euphorbia*-stems in the two arid islands of Lanzarote and Fuerteventura, the *laurineus*, on the other hand, has been observed hitherto only in the laurel-regions of a comparatively high elevation in Teneriffe, Gomera, and Palma, where it occurs beneath the dead bark of the old trees, in the dampest and most sylvan spots. It may be known from the *caulium* by its elytra being just perceptibly less ovate and still more deeply sculptured (the punctures being excessively large and the interstices somewhat raised, or convex), by its antennæ and legs being a trifle longer and paler, and by its scutellum (although minute) being always developed and readily distinguishable even under an ordinary lens. The Palman form, which in my Paper "on the Atlantic *Cossonides*" I have regarded as the "*var*  $\beta$  *capitulatus*," differs a little from that which obtains in Teneriffe, "having its prothorax (when viewed beneath the microscope) subulutaceous, with the punctures rather smaller and more dense, its elytral interstices somewhat less convex, and its antennal club a trifle more abbreviated and abrupt," but there can be no doubt, I think, that it is a mere insular phasis of the other.

I have taken the *P. laurineus*, in its typical state, in the laurel-woods above Taganana, as also in those at Las Mercedes and the Agua Garcia, of Teneriffe, and the *var*  $\beta$ , in similar situations, in the Barranco da Agua and the Barranco de Galga, of Palma. It was likewise found, though sparingly, by Dr Crotch in Gomera.

#### 438 *Phlécephagus affinis*.

*Phlécephagus affinis*, Woll, *Trans Ent Soc Lond* v 373 (1861)

*Habitat* in Teneriffa et Hierro, ramos Euphorbiarum emortuos nisi fallor præcipue destruens

In my Paper "on the Atlantic *Cossonides*" I have remarked that "For the present *Phlécephagus* I have no very decided structural character, and I can therefore best express it *negatively*—i. e., by

stating what it is *not*. Thus, its exceedingly perceptible scutellum (when viewed beneath the microscope) at once removes it from the *P. caribæum* and *piceus*, whilst its sufficiently expanded third tarsal joint will likewise prevent its confusion with the latter, and therefore à fortiori with the *simplicipes*. It remains, therefore, only to point out its distinctions from the *laurineus*, and this, in its normal state, is easily done, since it is not only less deeply sculptured, and with its antennæ somewhat darker and not quite so elongate, but its elytral interstices are less convex, and its prothorax (like the *var. β* of the *laurineus*) is more or less subalutaceous, and with its punctures a little smaller and more dense."

The *P. affinis* is, I believe, attached principally to the *Euphorbia*-stems of low and intermediate altitudes, at all events I have taken it in such situations at Taganana, and the Agua Mansa, in Teneriffe, as also, at a very slight elevation above the sea-level, in the district of El Golfo, on the western side of Hierro. The specimens from Hierro (corresponding to the "*var. β proximus*" of my Paper) have their elytral interstices a trifle more elevated and their prothorax (when viewed beneath the microscope) not perceptibly alutaceous, but I think they merely represent a slight variety of the Teneriffan species.

#### 439. *Phloeophagus simplicipes*

*Phloeophagus simplicipes*, Woll., *Trans. Ent. Soc. Lond.* v 374 (1861)

*Habitat* Teneriffan, arbores *Fici* antiquas in inferioribus perforans

In its dark hue and deeply sculptured surface the present *Phloeophagus* has every appearance, at first sight, of the *laurineus*, except that it is a little smaller, nevertheless on a closer inspection it will be seen to have its third tarsal joint scarcely at all dilated or bilobed—at any rate very much less so than is the case in that species, whilst, in minor particulars, its somewhat shorter scape, and just perceptibly less ventricose elytra, the punctures of which are *proportionally* still larger, should be noticed. In its habits also it is not the same as that insect, for whilst the *P. laurineus* occurs in damp sylvan spots of intermediate and lofty altitudes, the only examples (ten in number) which I have seen of the *simplicipes* were captured from out of the dry, rotten wood of an old fig-tree, at the mouth of the Barranco do Passo Alto, near S<sup>t</sup> Cruz, in Teneriffe, on an arid slope only just elevated above the sea-level. It is probable, however, that its attachment, in that particular locality, to the *fig-tree* may have been accidental, though such, at all events, would imply that its *range* is lower than that of the *laurineus*.

440 *Phlæophagus piceus*.

*Phlæophagus piceus*, Woll, *Trans Ent Soc Lond* v 374 (1861)

*Habitat* Lanzaïotam, Fuerteventuram et Canariam, in arboribus antiquis *Fici* præcipue degens

Its somewhat narrower outline and more piceous hue, in conjunction with its rather less coarsely punctured prothorax, its obsolete (or subobsolete) scutellum, and its only slightly expanded antepenultimate tarsal joint, will sufficiently characterize this species. As regards its mode of life, it seems to occur principally in the rotten wood of old fig-trees at low and intermediate elevations, under which circumstances I have taken it in Lanzaïote and Fuerteventura, and at Mogan in Grand Canary,—in the first of which islands it was found also by Mr Gray. The Lanzaïotan and Fuerteventuran specimens, which in my Memoir “on the Atlantic *Cossonides*” I have regarded as the “*var β subparallelus*,” are a little larger and more parallel than those from Mogan in Grand Canary, and have their prothorax somewhat more finely and closely punctured, but their other details, no less than their habits, do not appear to differ from the Canarian ones, and I believe that it would scarcely be safe to treat them as specifically distinct.

Genus 184 **PENTATEMNUS**

Wollaston, *Trans Ent Soc Lond* v 385 (1861)

441 *Pentatemnus arenarius*

*Pentatemnus arenarius*, Woll, *Trans Ent Soc Lond* v 388 pl 19 t 1 (1861)

*Habitat* Lanzaïotam, Fuerteventuram et Canariam, ad radices plantarum in arenosis aridis submaritimis crescentium fodiens

Of this curious insect, so remarkable (*amongst the Cossonides*) for its convex, fusiform, *pubescent* body, obsolete eyes, thick, abbreviated antennæ (with their 5-jointed funiculus), subfossorial habits, and for the minute spine with which the *inner* apical angle of its tibiae is furnished, I have given the full details (structural and diagnostic) in my Paper “on the Atlantic *Cossonides*.” Its mode of life is very peculiar, it being found about the roots of the few shrubby plants (particularly the *Zygophyllum Fontanesii*, Webb, and a small *Euphorbia*) which stud the dry sandy wastes of Lanzaïote, Fuerteventura, and Grand Canary,—usually at a considerable depth beneath the surface of the ground. Hitherto I have observed it principally in Fuerteventura, where it was first captured by Mr Gray and myself.

(on the sand-hills to the south of the Puerto de Cabras) at the end of January 1858,—in which locality I again met with it during April of the following year. But it is in the arid tracts in the north of that island, at Corralejo, that I have taken it more abundantly. My few Lanzarotan specimens are from the neighbourhood of Arrecife, and the Grand Canarian ones from the sandy district in the extreme south, around Maspalomas. I likewise met with it (on the 11th of March 1859) in the little island of Graciosa, off the north of Lanzarote.

### Genus 185 **ONYCHOLIPS**

Wollaston, *Trans Ent Soc Lond* v 389 (1861)

#### 442 *Onycholips bifurcatus*

*Onycholips bifurcatus*, Woll, *Trans Ent Soc Lond* v 394 pl 19 f 2 (1861)

*Habitat* Lanzarotam, Fuerteventuram et Canariam, in locis similibus ac *Pentatemonus anenarius* et unà cum illo degens, sed rarius.

It will be needless for me here to enter into any details concerning the *O. bifurcatus*, since I have done so, at very great length, in my Paper “on the Atlantic *Cossonides*.” I may, however, just repeat, what I there stated, that “in its marvellously reduced antennal scape (which is so excessively short as to be entirely buried within the deep fovea, or abbreviated *scrobs*, in which it is implanted) as well as in the very unusual proportions of its six-jointed funiculus\*, its total freedom from even the rudiments of eyes, and its most wonderful tibiae and feet, this extraordinary insect presents a combination of features perfectly anomalous, and which I believe are quite unparalleled in any Coleopterous genus on record. Indeed the structure of its tibiae and tarsi are so outrageously abnormal, that, did not the general outward contour of the creature, and the formation of its rostrum, oral organs, and antennae (not to mention its *superficial* points of resemblance with the exponent of the preceding genus) bespeak it as Rhynchophoroid, it would have been quite impossible to decide to what primary division of the Coleoptera it should be referred.”

In its *subglobose*, *hairy*, and testaceous body, as well as in its fossorial habits, no form could appear further removed, *prima facie*, from the normal members of the present Section of the *Rhynchophora* than *Onycholips*. Nevertheless, after considering this question very care-

\* The first and second (!) joints of the funiculus are very large and thick, whilst the remaining four are short and small.

fully, I am satisfied that the whole of these blind, pilose, sand-infesting, burrowing *Curculionide* of the Atlantic islands (namely, *Pentatemnus*, *Onycholips*, and the Porto Santan *Lipommata*) are most intimately allied, and in my Memoir above alluded to I discussed their affinities *in extenso*, together with those of the almost blind *Mesoxenus*, and arrived at the conclusion that the four genera could not properly, in a natural system of arrangement, be placed far asunder,—adding, “If we may consider, therefore, their near relationship as a settled point, it becomes comparatively easy to discuss their affinities, for, had the *second of them only* (*i. e.* *Onycholips*) been brought to light, we might have had great difficulty in referring it to any known subfamily or group,—the structure of its four hinder tarsi and other minutæ being quite unintelligible without the aid of some collateral form to suggest a partial explanation. But, granting its kinship with *Pentatemnus* and *Lipommata*, we at once connect it with the *Mesoxeni* (of Madeira and Teneriffe), which *Pentatemnus* manifestly approaches, and thence with *Pentarthrum* and the typical *Cossonides*”

In its mode of life *Onycholips* seems to be identical with *Pentatemnus*, with which indeed it is found in company. It was first taken, by Mr Gray and myself, at the end of January 1858, about the roots of the few shrubby plants, around which solid hillocks have been gradually accumulated from the drifting sand, in the arid tract to the south of Puerto de Cabras in Fuerteventura—a spot in which I again met with it during April of the following year. And I also captured a single specimen, in a similar situation, on the sandy isthmus of Grand Canary which connects the Isleta with the mainland, as well as in the little island of Giaciosa, off the north of Lanzarote.

#### Genus 186 MESOXENUS.

Wollaston, *Trans Ent Soc Lond* v 395 (1861)

##### 443 *Mesoxenus Monizianus*

*Pentarthrum Monizianum*, *Woll, Ann Nat Hist* v 450 (1860)

*Mesoxenus Monizianus*, *Id, Trans Ent Soc Lond* v 396 pl 19 f 4 (1861)

*Habitat* in Teneriffa, rarissimus

This insect is the only member of the *Cossonides* enumerated in the present Catalogue which has been observed hitherto beyond the Canarian Group, it having been detected also in Madeira—by Senhor Moniz, who obtained many specimens of it from under old boards lying on the ampearth in his garden at Funchal. At the Canaries

it would appear to be very rare, two examples only, both of them from Teneriffe, having as yet come beneath my notice,—one of which I captured in a house immediately above the Puerto of Orotava, during March 1858, whilst the other was found by the Rev R T Lowe, during April 1860, in a dead *Euphorbia*-stem at Garachico. Its convex, fusiform body, æneous hue, and shining, lightly sculptured surface, in conjunction with its obsolete eyes and 5-jointed funiculus, will, apart from numerous secondary characters (fully pointed out in my diagnosis), suffice to distinguish it

### Genus 187 MESITES

Schönherr, *Gen et Spec Curc* iv 1043 (1838)

§ I *Corpus sat magnum, parallelum, femoribus omnibus muticis*

#### 444 *Mesites complanatus*

*Mesites complanatus*, Woll, *Trans Ent Soc Lond* v 401 (1861)

*Habitat* Palmam, sub cortice laurorum laxo in editioribus sylvaticis hinc inde haud infrequens

In my Paper on the *Cossonides* I have stated that “the present large and beautiful *Mesites* (which, so far as I have hitherto observed, appears to be peculiar to the island of Palma) may be known readily from the following one by its broader outline, more depressed, deeply sculptured surface, and darker hue. Its prothorax is wider, and more rounded at the sides, than is the case in that insect, with its punctures considerably larger and less dense, and its central keel more evident, whilst its elytral stræ are *much* deeper, wider, and more coarsely crenated, and the interstices proportionally narrower and more costate. I took it, not uncommonly, beneath the loose bark of the native laurels, in the dense sylvan ravines of Palma, at rather a high elevation—especially the Barianco da Agua and the Barianco de Galga—during May and June of 1858”

#### 445 *Mesites persimilis*

*Mesites persimilis*, Woll, *Trans Ent Soc Lond* v 402 (1861)

*Habitat* in locis similibus ac præcedens, sed in Teneriffa (nec Palma)

“The *M. persimilis*, which abounds in certain spots within the sylvan regions of Teneriffe, is narrower, less depressed, more piceous, and (on the average) rather smaller than its Palman representative, its prothorax, also, is less rounded, or widened, at the sides, more closely and less deeply punctured, and with its central keel less dis-

tinct, whilst its elytra have their striæ very much narrower and less deeply crenated, and their interstices (proportionally) broader and less convex

"Both the present *Mesites* and the last one belong more particularly to the same type as the *M maderensis* and the British *M Tardus*, and, indeed, the *persimilis* is very closely allied to the former, with which I had at first imagined it to be identical. It may, however, be at once known from it through its almost entirely wanting (as is the case also with the *M complanatus*) the fine elytral pubescence which is so conspicuous in the Madeiran species, its prothoracic keel, also, is more obscure, and its elytra are less convex, with their striæ much broader, deeper, and more coarsely crenulated. In both of these Canarian species the eyes are rather smaller, and more oblong, than in the *M maderensis*" [*loc cit* pp 402, 403] Teneriffan examples of the *M persimilis* have also been communicated by Dr Crotch

#### 446 *Mesites proximus*

*Mesites proximus*, Woll, *Trans Ent Soc Lond* v 404 (1861)

*Habitat* Teneriffan, ad Taganana Maio A D 1859 parce repertus

"In outline the *M proximus* is a trifle less parallel than the preceding members of this Section, though its elytra have only a faint tendency to the posterior attenuation which is so very evident in the two exponents of the following one, its male femora, however, have not any appearance of that obtuse, subdentiform projection on their underside which characterizes the *M fusiformis* and *pubipennis*. It is a little smaller and more depressed than the *persimilis*, its colour is more cloudy, or *unequal* (after the fashion of tortoiseshell), its prothorax is more rounded at the sides, rather coarsely alutaceous, and very much more finely and remotely punctured (and with comparatively larger *additional* punctures in its central basal depression), its elytra are more evidently (though very slightly) subpubescent and with their striæ proportionally broader and deeper, and its funiculus-joints are altogether somewhat shorter and more compact. From the Madeiran *M euphorbiæ* it may be known by its darker hue, more laterally-rounded prothorax (which has its hinder central punctures much more coarse), by its larger frontal fovea, and by its elytral striæ being very much broader, deeper, and more distinctly crenated" [*loc cit* pp 404, 405]

Hitherto I have seen but two examples of this species, both of which I captured at Taganana, in the north of Teneriffe, during May 1859

§ II. *Corpus minus, subfusiforme (elytris postice sensim acuminatis), femoribus masculis subtus obtuse subdentatis*

#### 447 *Mesites fusiformis*.

*Mesites fusiformis*, Woll, *Trans Ent Soc Lond* v 405 (1861)

*Habitat* insulas Canarienses, in Palma solâ adhuc haud detectus, truncos ramulosque Euphorbiarum emortuos ubique destruens

"The present *Mesites* and the *M pubipennis* may at once be known from those already enumerated by their subfusiform outline (their elytra being more or less perceptibly attenuated posteriorly) and by their male femora being obtusely subdentate beneath, whilst *inter se* they will be recognized by the *M fusiformis* being (like the three preceding species) free from any trace of the lurid pubescence which is so conspicuous in the Palman representative. The *M fusiformis* is, likewise, less deeply sculptured than the *pubipennis*, and its elytral interstices are less convex and more sparingly (and even more minutely) punctulated."

"The *M fusiformis* is most abundant throughout the Canarian Group,—Palma being the only one of the seven islands in which, up to the present date, I have not taken it. Being thus universal, however, there can be little doubt that it must exist in Palma likewise, and the fact of my sojourn there, in May and June of 1858, being somewhat late in the season for the *Euphorbia*-insects, may perhaps be a sufficient explanation for its having escaped me in that island. Nevertheless it is certainly remarkable that the few specimens of the genus *Mesites* which I happened to secure whilst at Palma (or which were secured previously by Mr Gray) from the dead stems of the Euphorbias should have been specifically distinct from those which obtain throughout the remainder of the archipelago. Nor is this rendered the less curious from the circumstance that the large *M peisimalis*, which infests the laurel-woods of Teneriffe, should be, also, represented in the sylvan districts of Palma by an allied but most conspicuous species, the *M complanatus*!" [*loc cit* pp 405, 406]

In Lanzarote and Hierro the *M fusiformis* was taken likewise by Mr Gray, in Teneriffe by the Barão do Castello de Paiva, and in Teneriffe and Gomera by Dr Clotch, and in the little islands of Graciosa and Lobos, off the extreme north of Lanzarote and Fuerteventura (respectively), I have myself captured it.

#### 448 *Mesites pubipennis*

*Mesites pubipennis*, Woll, *Trans Ent Soc Lond* v 406 (1861)

*Habitat* in locis similibus ac præcedens sed in ins Palma, nec alibi

As already stated, the *M pubipennis* is apparently peculiar to Palma, where it was first captured by Mr Gray during February 1858, and where, at the end of May of the same year, I took a few more specimens, from out of the decayed *Euphorbia*-stems in the Barranco above Sta Cruz. "That it is no modification of the *M fusiformis*, which is so abundant and universal throughout the other islands of the Canarian archipelago, seems evident from the fact that that insect remains constant under the various circumstances and conditions, and in the innumerable localities, in which it is elsewhere found—being, to all appearance, quite independent both of external agencies and altitude. I conclude, therefore, that the very decided characters of sculpture and clothing which distinguish the *M pubipennis* are truly specific ones, and such as cannot be referred to local influences of any kind."

"The pubescent elytra of the *M pubipennis* (which have then interstices more convex and evidently punctulated, and their striae broader and deeper), in conjunction with its more closely and roughly punctured prothorax (especially, however, of the female sex)," will immediately distinguish it from the last species [*loc cit* p 407]

(Subfam RHYNCHOPHORIDES)

Genus 188 **SITOPHILUS**

Schönherr, *Gen et Spec Curc* iv 967 (1838)

449 **Sitophilus granarius**

*Curculio granarius*, Linn, *Fna Suec* 587 (1761)

*Sitophilus granarius*, Schön, *Gen et Spec Curc* iv 977 (1838)

——\* *linearis* P, Brulle, in *Webb et Berth (Col)* 73 (1838)

—— *granarius*, Woll, *Ins Mad* 321 (1854)

—— —, *Id*, *Cat Mad Col* 104 (1857)

*Habitat* insulas Canarienses, in Gomera solâ adhuc haud observatus

This cosmopolitan insect has become naturalized at the Canaries (as completely as in Madeira), where it is doubtless universal. Hitherto, however, like the following one, I do not happen to have observed it in Gomera—where, however, there can be no question that it is as common as elsewhere. But in Lanzarote, Fuerteventura, Grand Ca-

\* M Brulle omits all notice of the common *S granarius*, which abounds at the Canaries, but records in his list (in addition to the *S oryzae*) the *S linearis*, Hbst. Amongst the numerous *Sitophilus* which I have examined from the various islands, I cannot detect a vestige of any species except the *granarius* and *oryzae*, and, from the inaccuracy, therefore, of M Brulle's Catalogue, which moreover does not give so much as a single *habitat*, I have little doubt that he has mistaken an immature example of the former for that insect.

nary, Palma, and Hierro I have captured it, more or less abundantly. In Lanzarote and Hierro it was found likewise by Mr Gray, and from Teneriffe it has been communicated by the Barão do Castello de Paiva. It occurs principally beneath the refuse around the base of corn-stacks, though it may also be taken in, and about, houses and granaries.

#### 450 *Sitophilus oryzae*

*Curculio oryzae*, *Linn*, *Cent. Ins* 12 (1763)

*Sitophilus oryzae*, *Brulle*, in *Webb et Berth (Col)* 73 (1838)

— — —, *Woll*, *Ins. Mad* 322 (1854)

— — —, *Id*, *Cat. Mad. Col* 105 (1857)

— — —, *Hantung*, *Geolog. Verhältn. Lanz. und Fuert* 141

*Habitat* insulas omnes Canarienses, vulgaris

Like the last species, a mere importation into these islands, where, however, it has established itself even more completely than it has at Madeira. It is universal throughout the archipelago, for although I did not myself meet with it during our short sojourn in Gomera, four Gomeran examples have lately been communicated by Dr Crotch. But in the other six islands of the Group I have taken it, more or less abundantly. In Lanzarote, Palma, and Hierro it was found also by Mr Gray, and from Teneriffe it has been sent by the Barão do Castello de Paiva. It occurs in similar spots as the *S. granarius*, and usually indeed in company with it. It is recorded by M. Morelet at the Azores.

(Subfam. CRYPTORHYNCHIDES)

#### Genus 189 **CEUTHORHYNCHUS.**

Schönherr, *Curc. Disp. Meth.* 298 (1826)

#### 451 *Ceuthorhynchus pollinarius*

*Curculio pollinarius*, *Forst*, *Nov. Ins. Spec.* 33 (1772)

— *dentatus*, *Mshm*, *Ent. Brit.* 280 (1802)

*Ceuthorhynchus pollinarius*, *Schön*, *Gen. et Spec. Curc.* iv 543 (1837)

*Habitat* in Teneriffa et Hierro, hinc inde super folia Urticarum

The common European *C. pollinarius* occurs sparingly at the Canaries, where it has perhaps been naturalized from more northern latitudes. I have taken it, from off nettles, in semicultivated spots, above the Puerto Orotava, as also at the Agua Garcia, in Teneriffe, and near Valverde in Hierro,—in the first of which islands it was found likewise by Mr Gray and Dr Crotch.

#### 452 *Ceuthorhynchus quadridens*

*Curculio quadridens*, *Pnz*, *Fna. Germ.* 13 (1796)

*Ceuthorhynchus quadridens*, *Schön*, *Gen. et Spec. Curc.* iv 534 (1837)

*Ceutorhynchus quadridens*, *Woll, Ins Mad* 326 (1854)

— —, *Id, Cat Mad Col* 105 (1857)

*Habitat* in Fuerteventura, Teneriffa, Gomera, Palma et Hierro, super folia plantarum præcipue in cultis occurrens

There can be little doubt, I think, that the present insect, which abounds in most parts of Europe and which occurs also at Madeira, has been imported into these islands. I have taken it, in cultivated spots, in the Rio Palmas of Fuerteventura, at Sta Cruz and on the mountains above it, as well as about Souzal, in Teneriffe, and near Valverde in Hierro, and it was captured by Mr Gray in Gomera and Palma, and by Dr Crotch in Teneriffe and Gomera. We may be pretty sure, therefore, that it is universal throughout the archipelago, for it can scarcely be absent from either Lanzarote or Grand Canary.

#### 453 *Ceuthorhynchus nigroterminatus*

*Ceutorhynchus nigroterminatus*, *Woll, Ins Mad* 327 (1854)

— —, *Id, Cat Mad Col* 106 (1857)

*Habitat* in Teneriffa et Hierro, passim

This insect, which occurs sparingly in Madeira, is in all probability pretty generally distributed over the Canarian Group, though hitherto I have observed it only in Teneriffe and Hierro,—namely, at Souzal, the Agua Garcia, the Agua Mansa, and near Orotava, of the former, and close to Valverde of the latter. A Teneriffan example has also been communicated by Dr Crotch. It occurs principally in, or in the vicinity of, cultivated spots.

#### 454 *Ceuthorhynchus pyrrhorhynchus*

*Cuculio pyrrhorhynchus*, *Mshn, Ent Brit* 257 (1802)

*Nedrus suturalis*, *Steph, Ill Brit Ent* v 419 (1832)

*Ceuthorhynchus pulvinatus*, *Schön, Gen et Spec Cuc* iv 494 (1837)

*Habitat* Fuerteventuram, in cultis parce deprehensus

The common European *C. pyrrhorhynchus* may perhaps have been accidentally introduced from more northern latitudes into these islands, where, however, it is extremely rare. Hitherto I have met with it only in Fuerteventura, namely at Agua Bueyes and at Oliva.

#### 455 *Ceuthorhynchus phytobioides*, n. sp.

*C. niger*, capite prothoraceque dense rugoso-punctatis, hinc pone apicem (dilatatiorem subrecurvum) profunde constricto, postice canaliculâ media latâ necnon utrinque tuberculo instructo, elytris prescenscentioribus, rotundato-obovatis basi truncatis, profunde striatis (striis vix punctatis), interstitio tertio (necnon extra hoc etiam al-

ternis, sed minus evidenter) latiore elevato et nigro albidoque squamoso-tessellato, antennis pedibusque elongatis, rufo-testaceis, illarum capitulo nigrescente, femoribus dentatis, tarsorum articulo primo longiusculo

*Mas* tibus posterioribus ad apicem internum spinâ minutâ armatis — Long corp lin  $1\frac{1}{3}$ .

*Habitat* Teneriffam sylvaticam, supra Tagananam semel captus

The present *Ceuthorhynchus* and the *hesperus* are remarkable, *inter alia*, for their third elytral interstices (and indeed the alternate ones also on the *outer* side of it, though less evidently so) being not only widened and somewhat raised, but also sparingly tessellated with blackish and whitish scales. Their femora, moreover, are armed beneath with an acute spine. In its special characters, the *C. phytobioides* is rather smaller than its ally, its elytra (which are rounder and more obovate) are not quite so black and have their striae less evidently punctured, and its limbs are longer and rather paler—the first two joints of the funiculus and the basal one of the feet being conspicuously more elongated. As in many of the *Ceuthorhynchi*, its male sex (which I have alone seen) has the inner apices of its four hinder tibiae produced into a very minute terminal spine. It is hitherto unique, the single example from which the above diagnosis has been drawn out having been captured by myself, during May 1859, at Taganana, in the north of Teneriffe. Its rounded elytra and elongate legs, in conjunction with its tubercled prothorax, give it much the appearance, *primâ facie*, of a *Phytobius*—a fact which has suggested its specific name\*

#### 456 *Ceuthorhynchus hesperus*, n. sp.

*C* sp. præcedenti similis, sed paulo major, elytris minus rotundatis (magisobovato-quadratis), nigrescentioribus, striis evidentius punctatis, antennis pedibusque brevioribus, paulo magis obscurioribus, funiculi articulis (præsertim 1<sup>mo</sup> et 2<sup>do</sup>) necnon tarsorum basali conspieue minus elongatis

*Mas* adhuc latet

*Fem* tibus omnibus ad apicem internum simplicibus — Long corp lin vix  $1\frac{1}{2}$

*Habitat* in ins. Hierro, ad rupes aquosas herbidas excelsas in regione El Golfo dictâ exemplar unum, Februario A. D. 1858, deprehendi

\* In affinity the *C. phytobioides* is evidently very close to the Madeiran *lineato-tessellatus*, agreeing with that insect almost exactly in its outline and sculpture and in the general plan of its ornamentation, nevertheless specifically it is abundantly distinct from it, being scarcely more than half the size and of a different colour, with the basal joint of its feet *relatively* more elongated and with the tooth of its front tibiae much more developed

From my having obtained but a single specimen, and that a female, of the present insect, and in like manner only a male of the preceding one, I had at first imagined, from their near resemblance to each other, that they might perhaps be but the sexes of one species, nevertheless a closer examination shows an abundance of differences which, I think, cannot possibly be sexual. Thus, the *C hesperus* is rather the larger of the two, its elytra are blacker, and less rounded at the sides (being somewhat broader and more quadrate), and have their striæ more evidently punctured, and its limbs, particularly the antennæ, are shorter and (although pale) of an obscurer tint. My unique example was captured from amongst vegetation on some wet rocks, at a high elevation, on the descent from the Cumbre into the region of El Golfo, on the west of Hierro.

From the fact of the *C hesperus* and *phytobioides* having so strong an affinity with the (nevertheless comparatively gigantic) *lineatessellatus* of Madeira, and since the last insect appears to be attached exclusively to the foliage of the flat *Sempervivum patina*, Lowe, which studs the rocks in the damper spots of that island, I have little doubt that both of these Canarian species will be found to have a similar habit, and that they must consequently be searched for on the succulent leaves of the *Semperviva* and *Seda* within the sylvan districts.

### Genus 190 ACALLES.

Schönherr, *Curc. Disp. Meth.* 295 (1826)

In describing the following twelve species of *Acalles* I do not think it necessary to give their sexual distinctions, which are the same (or very nearly so) in all of them. In the males the rostrum is opaque and coarsely sculptured, whilst in the females it is a trifle longer, narrower, and more acute, as also more piceous and shining, and much more lightly sculptured.

#### 457 *Acalles argillosus*

*A. squamis argillosis et brunneo-albidis densissime nebulosus, rostris subrecto, ad basin ipsissimam minus conspicue exciso, prothorace postice leviter angustato, ante medium setoso-bituberculato, elytris profunde punctato-striatis, postice valde productis coarctatis, ad apicem ipsissimum obtuse subbisinuato-truncatis, carinis interruptis nodulisque (præsertim post medium) instructis, ante apicem fasciâ hastatâ pallidiore plus minus obscurâ ornatis, tarsis latis, valde squamosis*—Long corp. lin.  $3\frac{1}{2}$ —4

*Acalles argillosus*, *Schön.*, *Gen. et Spec. Curc.* iv. 327 (1837)

*Tylodes scaber*, *Brulle*, in *Webb et Berth. (Cat.)* 72 pl. 1 f. 14 (1838)

*Habitat* Teneriffam, intra caules *Kleinæ neriifoliæ*?, DC., degens

In their gigantic size the present *Acalles* and the following one differ widely from the other species enumerated. *Inter se*, however, they are very nearly related, nevertheless the *argillosus* is perhaps, on the average, a little larger than the *æoni*, and the scales with which it is thickly clothed are altogether of a paler, or more silvery, hue, its rostrum (at any rate of the females) is a trifle shorter and straighter, more densely squamose posteriorly, less perceptibly incised on either side at its *extreme* base (though this is partly due to the scales being more numerous in that region), and in both sexes less deeply sculptured, its prothorax is rather less narrowed behind, its elytra (which have their immense punctures more evidently arranged in longitudinal striæ) have their extreme apex (although equally constricted) less regularly rounded, or somewhat more obtuse and subbisinate, its tarsi are, if anything, a little shorter and broader, and its tibial hook is a trifle shorter and more acute.

Hitherto the *A. argillosus* has been observed only in Teneriffe, where I obtained several examples, during May of 1859, at Taganana. It is an insect of eminently musical powers, being able to create a loud jarring noise by the friction of the *inner* apical portion of its elytra (which is roughened, or reticulated) against the setose surface of its pygidium. Indeed this curious capability (which appears, however, to exist, more or less, in *all* the members of the present genus, as well as in certain other\* Curculionids) formed the subject of a short Paper which I contributed to the 'Ann. of Nat. Hist.' in July 1860. In fact the specimens were actually discovered on account of this very fact, by my Portuguese attendant, who, while shaking the hollow stem of a maritime shrub, was diverted by a concert of no less than eleven musicians within! And it would consequently appear (since additional examples moreover were in the pupa state) that the creature undergoes its transformations within the branches of that particular plant, whatsoever it may have been, and which, from the description given me at the time, I concluded was *probably* the *Kleinia neriifolia*, DC. And that this conclusion was correct seems now pretty evident, since, on examining M. Brullé's figure of his *Tylodes scaber* (for his "description," so called, is positively worthless, and applies equally to the whole twelve

\* In my Paper above alluded to, I described two large *Planthæ* which are similarly musical, and Mr. F. Smith has tested the British species of *Acalles*, and finds them to be gifted with a like power. Mr. Bewicke, who made most careful observations in Madeira, heard the various *Acalles* of that island stridulate most audibly, and he has lately informed me that he has detected the same noise in the *Ceuthorrhynchus echu*, "which sings beautifully—working its pygidium against the elytra which are curiously thickened."

species of the genus), I have not the slightest doubt that that insect is identical with the *Acalles argillosus*, and he expressly states (though, as usual, without any reference to the island in which it was found) that MM Webb and Berthelot record its capture "dans les branches et les vieux troncs du *Cacalia Kleinia*"—which is the same plant as DeCandolle's *K. neriifolia*.

M. Chevrolat has kindly communicated to me, from his collection, a type of Schonherr's *A. argillosus*, which appears to differ in no respect from my Teneriffan specimens except that its scales are a little paler still, or more silvery. I have, therefore, no doubt as to the synonymy of the species.

#### 458 *Acalles æoni*, n. sp.

*A.* squamis brunneis et albido-brunneis densissime nebulosus, rostrum subarcuato, longiusculo, ad basin ipsissimam conspicue utrinque exciso, prothorace postice angustato, ante medium setoso-bituberculato, elytris profunde substriato-punctatis, postice valde productis coarctatis, ad apicem ipsissimum conjunctim subrotundatis, carinis interruptis nodulisque subsetosis (præsertim post medium) instructis, ante apicem fasciâ hastata pallidiore plus minus obscura ornatis, tarsis longiusculis, piceis, articulo primo subgracili—Long corp. lin  $3\frac{1}{2}$ —vix 4.

*Acalles æoni*, Chevrolat, in litt.

*Habitat* Teneriffam, intra caules *Sempe viv* latens, a Dom Chevrolat communicatus.

As already implied, the distinctly darker, or browner, scales with which this species is clothed, and its slightly longer and more arcuated rostrum (at any rate of the females), which in both sexes is more roughly punctured and is also more naked posteriorly, which causes it to appear more conspicuously incised on either side of its *extreme* base, in conjunction with its prothorax being somewhat narrower behind, the termination of its elytra rather more pointed and entire (or less obtusely bisinuated), and its feet just perceptibly longer and less squamose, will serve to separate it from its near ally the *A. argillosus*.

The specimens (eight in number) from which the above diagnosis has been compiled have been communicated by M. Chevrolat, who purchased them from the material of a French naturalist who collected plants (and a few insects) at the Canaries and elsewhere. And I think that the note which accompanied them, as to their habits, is sufficiently special to vouch for its accuracy, so that even if no other evidence had existed I believe that I should have been

justified in admitting the insect into the present Catalogue. But since, in point of fact, I myself captured a single individual (crawling on the outside of a house at the Puerto Orotava) in Teneriffe, of a species which is so near to M. Cheviolat's that I imagine it cannot be regarded as more than a variety of it, I further conceive that it may safely be recorded (not merely as Canarian but) as *Teneriffan*, and I have consequently entered it as such.

The note above alluded to was to the effect that the insect underwent its transformations within the stems of the *Æonium frutescens* (*Æonium* being, as I am informed by the Rev R. T. Lowe, "a needless genus of Webb's made out of *Sempevivum*, Linn., and embracing about twelve out of the numerous Canarian *Sempeviva*") And as this accords well with my own observations on the mode of life of the *A. angulosus*, to which it is most nearly allied, I accept it unreservedly, and have adopted the name proposed for it by M. Cheviolat.

#### 459 *Acalles fortunatus*, n. sp.

*A.* sp. præcedente minor et magis variegatus, rostro femineo angustiore, magis tereti, rufescentiore et multo subtilius punctato, rostro masculino sensim brevior, elytris postice magis subito et breviter coarctatis.—Long. corp. lin.  $2\frac{1}{2}$ – $3\frac{1}{2}$

*Obs.* Species *A. acuto* major minus setosa et postice minus acuta, rostro femineo longiore et sensim profundius punctulato, rostro masculino latiore grossiusque punctato, tarsis robustioribus.

*Habitat* Gomeram, supra "Heimigua" a Dom. Crotch lectus.

The six specimens from which the present diagnosis has been compiled were taken by Dr. Crotch at Heimigua, in Gomeia, during the spring of 1862. They have no very decided distinguishing specific character, and appear in some measure to be intermediate between the *A. æoni* and *acutus*, being smaller and more variegated than the former, more suddenly (and shortly) constricted behind, with their male rostrum rather more abbreviated, and their female one slenderer, more cylindric, more rufescent, and more lightly punctured,—but larger than the latter, less acute posteriorly, and altogether a little less setose, with their rostrum in both sexes somewhat more coarsely punctured—the male one moreover being broader, and the female one longer, than is the case in the *A. acutus*.

To what extent the characters of *all* these Canarian *Acalles* are liable to vary, it is most difficult to ascertain, and further material must decide whether any of those here enumerated are due to either local influences or isolation.

460 *Acalles xerampelinus*.

*A* elongato-suboblongus, angustulus, squamis flavo- (vel etiam rufo-) brunneis densissime tectus, prothorace postice vix angustato, ante medium leviter setoso-bituberculato, elytris postice longissime productis anguste coarctatis, carinis vix interruptis nodulisque duobus parvis nigrosetosis pone medium instructis, longe ante apicem fasciâ angustâ hastatâ albidâ (ad utrumque latus antrorsum recte productâ, intus argute nigro-terminatâ sed extus plus minus suffusâ) ornatis, pedibus robustis, squamoso-concoloribus —Long corp ln 2-3

*Habitat* Teneriffam sylvaticam, in herbis humidiusculis captus

In its rather straightened body, which however is very much drawn out, or acuminate, behind, as well as in its more or less yellowish- (or even reddish-) brown surface, which (in unrubbed specimens) has merely the ordinary postmedial paler fascia of its elytra narrow and hastate but nevertheless *produced anteriorly* on either side in a straight line (it being, also, abruptly bounded *internally* by blacker scales, whilst *externally* it is more or less suffused, or gradually shaded off), this *Acalles* has such a singular appearance that it cannot possibly be confounded with any of the other species here enumerated. Although thickly coated with mud-like scales, it is less *setose* than perhaps any of its Canarian allies, some rigid bristles at the apex of its prothorax and two small darker fasciculi which clothe the minute nodules on the hinder disc of its elytra being almost the only conspicuous ones. Its ridges, or alternate interstices, are but very slightly raised, and hardly at all interrupted, and its legs, which are densely squamose, are concolorous with the rest of the surface—not being annulated with black.

The *A. xerampelinus* is extremely rare, and apparently confined to the sylvan districts of the intermediate elevations of Teneriffe. I have brushed it, sparingly, from out of the rank vegetation in damp spots, at the Agua Garcia, as well as in the laurel-woods on the mountains above Taganana.

461 *Acalles nubilosus*, n. sp.

*A* squamis brunneis et albidobrunneis densissime variegatus, prothorace postice vix angustato, ante medium leviter setoso-bituberculato, elytris postice productis coarctatis, carinis interruptis nodulisque duobus parvis nigrosetosis pone medium instructis, ante apicem fasciâ hastatâ albidiore (intus in medio argute terminatâ, sed postice fere in apicem pallidiorem suffusâ) ornatis, pedibus squamoso-variegatis —Long corp ln  $1\frac{3}{4}$ - $2\frac{1}{2}$

*Habitat* in laetis editioribus Teneriffæ, rarissimus

Known from the *A. xerampelinus* by its more ovate outline, and by the apex of its elytra being less drawn out, or produced, by its rather more variegated hue, the less rufescent colour of its darker scales, and by its paler ones being spread over a larger portion of its surface (including more or less of the basal region of its elytra), by its interrupted ridges being a little more developed, and by its post-medial fascia not being produced forward (in a straight line) on either side. Like that species, its surface is *comparatively* free from setæ, and its prothorax is but very slightly narrowed behind. The two specimens from which the above characters have been compiled were both taken in the sylvan districts of Teneriffe—one of them at Las Mercedes, and the other in the laurel-woods above Taganana.

#### 462 *Acalles sigma*, n sp

*A* squamis nigro-brunneis et (præcipue) nigrescentibus densissime tectus, prothorace postice angustato (ad latera rotundato), ante medium leviter setoso-bituberculato, elytris postice coarctatis, apice obtusis, carinis interruptis nodulisque duobus pone medium, omnibus setosis, instructis, pone medium fasciâ magnâ (postice in medio fasciculo elongato suturali nigrescente terminatâ) necnon ante medium utrinque maculâ parvâ albido-ornatis, pedibus elongatis, squamoso-variegatis.—Long corp ln  $2\frac{1}{2}$

*Habitat* in lauretis editioribus Palmæ, rarissimus

Judging from the two examples now before me, this *Acalles* is rather larger than any of the other species here enumerated except the *argillosus*, *ceoni*, and *verrucosus*. They were both of them taken in the laurel-districts of Palma; and the species seems to be remarkable for the dark, or blackish-brown, scales with which it is densely clothed, and for the very thick and almost snowy-white postmedial fascia of its elytra, which (in addition to having their interrupted ridges, or nodules, a good deal developed and setose) have likewise a small spot of paler scales, on either side, *before* the middle. Its elytra (which have an elongate sutural fascicle of darker setæ adjoining the centre of the *inner* edge of their fascia) have their punctures large and deep, and the extreme apex of them constricted portion obtuse.

#### 463 *Acalles senilis*, n sp

*A* squamis cinereis densissime nebulosus, prothorace postice angustato (ad latera valde rotundato), ante medium leviter setoso-bituberculato, elytris postice coarctatis, apice obtusis, carinis interruptis nodulisque duobus pone medium, omnibus setosis, instructis, pone medium fasciâ vix albidiorē (antice in medio sat argute terminatâ, sed postice suffusâ) ornatis, pedibus breviusculis, squamoso-variegatis.—Long corp ln 2

*Habitat* in Hierro, haud procul ab oppido Valverde semel captus

I do not think that the single specimen from which the above diagnosis has been drawn can safely be referred to any of the other species here enumerated, particularly when the remoteness of its *habitat* is taken into account. It was captured, by myself, near Valverde, in the island of Hierro, on the 11th of February 1858, and it may be known by the *cineous* scales with which it is densely clouded, by its postmedial fascia being suffused behind almost into the apex of the elytra, but bounded anteriorly by three darker fascicles of setæ, and by its limbs being rather short

464 *Acalles brevitarsis*, n sp

*A* squamis brunneis et flavo-brunneis densissime nebulosus, prothorace postice angustato (ad latera valde rotundato), ante medium setoso-bi- (vel etiam quatuor-) tuberculato, elytris postice breviter et subito coarctatis, apice sat obtusis, carinis interruptis nodulisque duobus omnino elevatis et valde setosis pone medium instructis, ibidem vix fasciatis sed antice pone scutellum plus minus dilutioribus, pedibus crassis squamoso-variegatis, tarsis posticis breviusculis — Long corp lin 2-2½

*Habitat* Canariam Grandem, in subsylvaticis regionis El Monte tempore vernali a d 1858 reperiuntur

The present *Acalles*, which I have taken hitherto only in the region of El Monte in Grand Canary, may be known by the yellowish-brown scales with which it is thickly mottled, and by its much developed and greatly setose nodules. It is nearly allied to the *acutus*, but is rather larger and of a paler brown, with its *general* surface less setose, though with its nodules (which are altogether considerably elevated) more so, with its prothorax wider in the middle and considerably rounder at the sides, with its elytra (which have then fascia apparently obsolete) somewhat more *shortly* constricted posteriorly, and obtuse at their extreme apex, with its legs a trifle more robust, and with its two hinder tarsi more abbreviated

465 *Acalles acutus*, n sp

*A* fere ut *A brevitarsis*, sed obscurior (minus brunneus) squamisque albidioribus irroratus, magis æqualiter setosus, prothorace angustiore, ad latera minus rotundato, elytris ad apicem coarctato-acutioribus, fasciâ postmediâ plerumque magis determinatâ sed nodulis minus elevatis, pedibus paulo minus incrassatis, tarsis gracilioribus et (præsertim posticis) sensim longioribus — Long corp lin 2-2½

*Habitat* in sylvaticis Teneriffæ, passim

This seems to be the least scarce of the Canarian *Acalles*, though I have hitherto observed it only in Teneriffe, but in the sylvan districts of that island, at intermediate and rather lofty elevations, it is apparently not very uncommon, occurring in the thickest parts of the forest. Although extremely variable in bulk, and difficult to procure in a perfect (or unrubbed) state, it may usually be recognized by the dark scales with which it is densely clothed, which are more or less besprinkled (especially behind the scutellum and across the disc of each elytron) with ashy ones and somewhat paler bristles, by its surface being more *equally* setose than in any of the other species (the setæ being longer, and more evidently developed, *between* the fascicles which stud the nodules), by its hastate fascia being (in clean and unabraded examples) rather well defined, both before and posteriorly, and by its legs and tarsi being somewhat slender.

The *A. acutus* may be regarded as the Canarian representative of the Madeiran *A. dispar*, which at first sight it a good deal resembles. It is, however, on the average, a little smaller and more setose than that insect, its elytra are less deeply sculptured, more pointed at their apex, and with less appearance of the elongate, darker, narrow sutural patch in front of the postmedial fascia, and its rostrum and feet are just perceptibly slenderer.

#### 466 *Acalles instabilis*, n. sp.

*A. fere ut A. acutus*, sed minor, minus setosus, prothorace ad latera vix rectiore, elytris postice vix minus coarctatis, fasciâ postice plerumque magis suffusâ, rostro fœmineo paulo levius punctato. *Vari*  $\beta$  *mundus* [an species?] Lætius coloratus, prothorace ad latera paulo magis rotundato, elytris squamis albidioribus adpersis [*Ins. Palma*].—Long corp. lin.  $1\frac{1}{2}$ —3.

*Habitat* in sylvaticis subsylvaticisque Canariæ, Teneriffæ et Palmæ, hinc inde haud infrequens.

Owing to the excessive variability of these Canarian *Acalles*, both in size and in the arrangement of their scales, and (above all) to the great difficulty of procuring perfect, or unrubbed, specimens, the limits of the species are not always easy to define, and thus, judging from the numerous examples now before me, the present one and the *A. acutus* would seem *primâ facie* to merge into each other. Yet I believe that they are nevertheless really distinct, even though the unsatisfactory state of certain more or less abraded specimens may render it doubtful to which of the two they should be assigned. Typically, however, the *A. instabilis* is smaller and less setose than the *acutus*, its prothorax is not quite so much rounded at the sides,

its elytral fascia is usually more suffused behind, and its female rostrum is a trifle more finely punctured. Two examples (the "*var*  $\beta$ ") which I captured in Palma, and which possibly should be separated, are more highly coloured than the others, with their prothorax less straightened at the sides, and with their elytra besprinkled with a few more conspicuous snowy-white scales.

The *A. instabilis* is far from uncommon in the sylvan districts of Teneriffe (where I have taken it at the Agua Mansa, Las Mercedes, and in the laurel-woods above Taganana), and I have also a specimen (rubbed and somewhat unsatisfactory, but which I believe nevertheless to be conspecific with the remainder) captured in Grand Canary, as also the pair above alluded to from the sylvan regions of Palma. So that, if my conclusions be correct, it would seem to have a wide range throughout the archipelago.

If the last species be regarded as representing the Madeiran *A. dispar*, perhaps the present one may be looked upon as the analogue of the *A. lunulatus* of that Group.

#### 467 *Acalles seticollis*, n. sp.

*A.* ovato-oblongus, angustulus, squamis brunneis et cinereis dense nebulosus, prothorace postice paulo angustato, utrinque obscure albidiore, in medio (præcipue ad basin) subnigrescente, ubique (sed præsertim antice et in medio) setis erectis obsito, elytris postice vix coarctatis, haud nodulosus sed setis erectis inter se distantibus obsitis, fasciâ postmediâ albidiore fere obsoletâ versus basin plus minus indistincte albido-nebulosis, pedibus (præsertim posticis) brevibus, obscure squamoso-variegatis.—Long. corp.  $\ln \frac{7}{8}$ —1.

*Habitat* in Hierro, haud procul ab oppido Valverde parce repertus.

I am far from certain that this very minute *Acalles* may not be a modification, peculiar to the island in which I obtained it of the Madeiran *A. Wollastoni*, nevertheless, since its surface is more setose, and its prothorax (which is rather less powerfully constricted behind the apex) will be seen, when denuded of its scales, to be *much* more deeply and closely punctured, whilst, on the other hand, the punctures of its elytral striæ are *less* developed, and with the interstices more rugulose, I think it would scarcely be safe to treat it absolutely as such. It may be known from all the other species here enumerated by its exceedingly diminutive bulk and rather narrower, or more oblong, outline, by its surface being free from both nodules and ridges, and most obscurely clouded with brown and ashy-brown scales, by its elytra being scarcely at all constricted posteriorly, and by its legs, especially the hinder pair, being somewhat abbie-

viated It is evidently extremely rare,—the only four specimens which I have seen having been captured by myself, immediately to the westward of Valverde, in the island of Hierro, on the 11th of February 1858

#### 468 *Acalles pilula*, n sp

*A* ovatus, laterahter subcompressus, squamis brunneis vestitus et cinereis paice irroratus, prothorace subconico, subconvexo, postice vix angustato, in medio leviter nigro-setoso-bituberculato, scutello obsoleto, elytris convexis, postice vix coarctatis et ibidem valde decurvis, fasciâ postmediâ plerumque obsoletâ sed fasciculis parvis setosis nigris (præsertim pone medium) instructis, pedibus, præsertim posticis, brevibus, obscure squamoso-variegatis

*Var*  $\beta$  *seminulum* [an species?] Multo major, pedibus longioribus —Long corp ln  $1-1\frac{1}{4}$ , *var*  $\beta$ ,  $1\frac{1}{2}$

*Habitat* in sylvaticis Teneriffæ et Palmæ, rarissimus

In its general *facies*, outline, and obsolete scutellum, the present *Acalles* is very nearly allied to the Madenian *A globulipennis*, of which it is strictly the Canarian representative, though I believe that it cannot be absolutely referred to it With the exception of the “*var*  $\beta$ ,” which is perhaps specifically distinct, it is rather smaller than that insect, its rostrum (at all events in the female sex) is a little slenderer and more convex, its prothorax is relatively narrower and more conical, and when denuded of its scales will be seen to be less constricted behind the apex, as also more deeply and less closely punctured, its elytra are somewhat convexer still, especially at their base, and the arrangement of its scales is not quite the same

The *A pilula* seems, like most of the species, to be extremely rare, and confined to sylvan and subsylvan spots of intermediate elevations I have taken it in Teneriffe and Palma,—namely, at Souzal, the Agua Garcia, and in the wood of La Esperanza, of the former, and in the Barranco de Galga of the latter

#### 469 *Acalles verrucosus*

*A* laterahter compressus, supia valde arcuatus, squamis nigrescentibus densissime tectus et dilutionibus irroratus, prothorace postice paulo angustato, ad latera late albedo-squamoso, ante medium setoso-4-tuberculato, elytris postice paulo coarctatis sed ibidem decurvis, nodulis plurimis setosis instructis, argute striato-punctatis, mox pone medium maculâ parvâ obluniformi utrinque valde abbreviatâ albedo-ornatis, pedibus tarsorumque articulo primo elongatis, tibiarum squamis erectis elongatis —Long corp ln  $2\frac{1}{3}-3$

*Acalles verrucosus*, *Woll, Ann Nat Hist* (3rd series) xi 219 (1863)

*Habitat* in elevatis sylvaticis Teneriffæ et Palmæ, rarissimus

This large *Acalles* is one of the most distinct and remarkable of the species hitherto detected in these islands, though belonging to somewhat the same *type* as the (comparatively diminutive) *A pilula*. It may readily be known by its *laterally compressed* outline and *greatly arcuated* upper surface, and by the dark scales (besprinkled nevertheless with browner, or more diluted, ones) with which it is clothed, —the sides of its prothorax, however, being broadly white, as also a very minute, lunulate sutural patch, placed at *about midway* between the base and (much decurved) apex of its elytra. Its nodules are extremely numerous, and (although not particularly large) sharply defined and setose, its legs and first tarsal joint are considerably elongated, and the scales of its tibiæ are setiform and erect.

The *A verrucosus* appears to be excessively rare, and peculiar, so far at least as I have yet observed, to the sylvan districts of Teneriffe and Palma—where it occurs, beneath loosened bark and rotten wood, in humid spots of a rather lofty elevation. I have taken it in the laurel-forests overlooking Point Anaga, and towards Taganana, of the former, and in similar situations on the ascent to the Cumbre, above Buenavista, in the latter.

#### Genus 191 ECHINODERA (nov gen.)

*Corpus*, et cæteræ, fere ut in *Acalles*, sed æquale, ubique subæqualiter setosum (nec nodosum nec costatum, et vix fasciculatum), postice minus (sc. vix) coarctatum atque ibidem magis decurvum, oculis minoribus (sc. minutis), regulariter ovalibus, valde demissis, scutello nullo, funiculi articulo secundo plus minus sensim longiore quam primo.

Ab Echinus, et δερν, collum.

There can be no doubt that the six insects described below are very closely related to *Acalles*, though I think they possess, in common, sufficient features to render their generic detachment advisable, but, from the fact of the oral organs being universally ignored in the numerous members of the *Rhynchophora*, I am unable to say whether any more decided characters might be brought to light from an accurate examination of those organs in this group. They differ mainly from *Acalles*, so far as their external details are concerned, in their more *even*, and more *equally*-setose, surfaces—which are alike free from nodules and ridges, and have their squamose bristles more regularly distributed throughout (being scarcely at all collected into *fasciculi*, or bunches), by their elytra being much less constricted, and more decurved, behind, by their eyes being considerably smaller, more strictly oval, and so extremely sunken, or depressed, that they

do not project in the slightest degree beyond the curvature of the head, and by the second joint of their funiculus being more or less perceptibly longer than the first, whereas in the typical *Acalles* it is more or less distinctly shorter than the basal one.

In enunciating the following six species, the diagnoses of which have been drawn out from the careful survey of a large number\* of individuals, I have been compelled to rely in a great measure upon their sculpture—which, unfortunately, is somewhat difficult of observation, since in order to be appreciated it requires the scales to be removed with which the insects are densely clothed. But, on the other hand, it should be borne in mind that a character is not the less real and important because it happens to be an inconvenient one to examine, and that, consequently, when other details are more or less unstable, it *must* be regarded as of primary significance. Next to the sculpture, I have found the most constant feature to consist in the precise outline of the elytra—modified, according to the species, by their more or less decurved apex, and the oblique lopping-off, in opposite directions, of their humeral region and terminal half (which occasions a more or less evident angle to be shaped-out at either side). Then the greater or less *erection*, and *length*, of the additional scale-like setæ seems to be the most satisfactory character. And last of all, as *least* to be depended upon (though varying, nevertheless, within limits pretty intelligible), is the exact colour, or markings, which the decumbent scales impart to the entire surface. Of course there are *some* other minutæ, such as size, the relative dilatation of the feet, &c, which afford collateral aid in the determination of these closely allied insects, but they are of less consequence, and will be adverted to in the several descriptions.

#### 470 *Echinodera hystrix*, n. sp.

*E. squamis fusco-brunneis nigrescentibusque dense variegata et fusco-cinereis plus minus obscure maculata, setis longiusculis erectis sat*

\* No less than 173 specimens of *Echinodera* are now before me,—of which 40 belong to the *E. hystrix*, 36 to the *crenata*, 57 to the *angulipennis*, 38 to the *orbiculata*, one to the *compacta*, and one to the *picta*. And, bearing out the conclusions, as to the species at which I have independently arrived, their topographical distribution seems extremely natural,—the *hystrix* occurring in Palma and Hierro (the two western islands of the Group), the *crenata* at the loftiest altitudes of Teneriffe (existing within the range of the “Retamas,” from about 6000 to 9000 feet above the sea), the *angulipennis* in the sylvan and subsylvan districts of Teneriffe at a distinctly lower (but nevertheless considerable) elevation, the *orbiculata* at the upper limits of the wooded regions of Teneriffe, and even ascending above them the *compacta* in Grand Canay, and the *picta* in the dry and barren island of Fuerteventura.

dense obsita, prothorace valde profunde et densissime punctato, setis apicalibus sæpius distincte longioribus, elytris elongato-ovatis, ad humeros vix oblique truncatis, valde profunde punctato-striatis (punctis maximis), pone medium maculâ magna obluniforâ (antice, sed vix postice, plus minus obscure nigro-terminata), necnon nebula parva indistinctâ (plus minus obsoletâ fractâ) versus humeros subcinereo-ornatis

*Variat* fere immaculata, squamis pallidioribus plus minus obsoletis  
—Long corp lin  $1\frac{1}{2}$ –2

*Habitat* in Palma et Hierro, locis intermediis passim

In then somewhat elongate-ovate elytra, which are more *gradually* narrowed towards the base (or less truncated, obliquely, at the shoulders), the present species and the following one have much in common, nevertheless when denuded of their scales they will be seen to be abundantly distinct from each other, for whilst the latter has its striæ *comparatively* fine and merely crenated, the *E hystrix* has them very deeply and regularly punctured—the punctures being of an enormous size. This difference in their sculpture causes the interstices of the *crenata* to be proportionally wide and flattened, whilst in the *hystrix* they are narrower and more costate. In minor details, the present insect is rather more obscurely coloured than its Teneriffan ally (the paler scales being usually less developed, and covering a smaller portion of the entire surface), the setæ with which it is studded are somewhat more numerous and erect, its rostrum is perhaps a trifle longer and slenderer, and the shape of its cloudy patches is not quite the same.

As yet I have observed the *E hystrix* only in Palma and Hierro, in the sylvan districts of which I took it, sparingly, during the winter and spring of 1858

#### 471 *Echmodera crenata*

*E* squamis fuscis nigrescentibusque dense variegata et cinereis plus minus maculata, setis longiusculis suberectis obsita, prothorace profunde et dense punctato, setis apicalibus vix longioribus, elytris elongato-ovatis, ad humeros vix oblique truncatis, sat profunde crenato-striatis, pone medium maculâ magnâ obluniforâ (antice et postice plus minus nigro-terminatâ), necnon nebula (plus minus magnâ suffusâ) versus humeros cinereo-ornatis

*Variat* squamis pallidioribus minus distinctis —Long corp lin  $1\frac{1}{2}$ –2

*Echmodera crenata*, Woll, *Ann Nat Hist* (3rd series) vi 219 (1863)

*Habitat* in montibus excelsis Teneriffæ, sub lapidibus inter 6000' et 9000' s m, ultra regiones sylvaticas occurrens

The *E crenata* appears to be confined to the higher elevations of

Teneriffe,—occurring, beneath stones, in the region of the *Spartium nubigena* (or “Retama”), from about 6000 to 9000 feet above the sea. In such situations I took it, not uncommonly, on the Cumbre adjoining the Cañadas, above Ycod el Alto, during May 1859, as well as on the opposite Cumbre, above the Agua Mansa. It is, on the average, a more variegated species than any of the others hitherto detected,—highly coloured and perfect examples (in which the scales are uninjured) having often their paler portions very distinctly and beautifully expressed. But in all instances it may be easily recognized (at any rate when sufficiently denuded to expose the sculpture) by its elytral striae being *comparatively* fine and simply *crenated*, with the interstices broader and less costate than is the case in the other *Echinodera* here enumerated. Even small and dark specimens may always be known from correspondingly obscure ones of the *angulipennis* by this character, as also by the shape of the elytra, which are more regularly elongate-ovate, being less obliquely truncated both at the shoulders and along the margin of their *terminal half*.

#### 472 *Echinodera angulipennis*, n. sp.

*E.* fere ut *E. crenata*, sed plerumque obscurior (minus variegata), setis paulo longioribus robustioribusque obsita, prothorace vix profundius densiusque punctato, elytris profundius crenato- (fere punctato-) striatis, interstitiis convexioribus, paulo magis convexis, subellipticis (minus elongato-ovatis), versus humeros necnon postice magis oblique truncatis, quare utrinque pone basin magis angulatis.—Long corp. lin.  $1\frac{1}{2}$ –2.

*Habitat* in sylvaticis subsylvaticisque Teneriffæ, passim.

The present species seems to be the universal one throughout the sylvan (and even subsylvan) regions of Teneriffe, having a distinctly lower range than the *E. crenata*. Indeed it is emphatically an insect of *intermediate* elevations,—never ascending, apparently, above the wooded districts, and only occasionally to be met with (in subsylvan spots) a little below them. I have taken it at Ycod el Alto, the Agua Mansa, the Agua Garcia, at Las Mercedes, and on the laurel-clad slopes above Taganana.

The *E. angulipennis* is usually a dull or obscurely coloured species,—a more or less faintly expressed hinder fascia and a few scattered palish scales being the only relief to its mottled-brown surface. It is rather more deeply sculptured than the *crenata* (though much less so than the *hystrix*), and the erect scale-like bristles with which it is beset are a little longer and more robust, its elytra too are convexer, as also more *shortly elliptic* (or less oblong-ovate)—a struc-

ture which is caused by their humeral region and apical half being more obliquely truncated, or lopped-off, in opposite directions, so as to shape-out a more evident *angle* on either side at about a third of the distance behind their base

#### 473 *Echinodera orbiculata*, n sp

*E* sp præcedenti similis, sed paulo minor, squamis nigrescentibus biunneo-albidisque magis regulariter irrorata et setis multo brevioribus ac minus erectis obsita, prothorace valde profunde et densissime punctato, elytris profundius punctato-striatis, suborbiculatis, et e rotundationibus et ad apicem magis incurvis, ergo postice obtusius rotundatis necnon ad humeros minus oblique truncatis, tarsis vix brevioribus et paulo minus dilatatis—Long corp ln  $1-1\frac{2}{3}$

*Habitat* Teneriffam, præcipue in sylvaticis editioribus sed interdum etiam ultra regiones sylvaticas (usque ad 7000' s m) ascendens

The rather smaller size of this species, in conjunction with its much shorter and more decumbent setæ, its usually more *speckled* surface (which is more or less irrorated with blackish, brown, and whitey-brown scales), its more globose and deeply sculptured elytra (which are more *obtusely rounded* behind, with their apex more decurved, and less obliquely truncated at their shoulders), and its just perceptibly more abbreviated and less expanded feet, will serve to distinguish it from the *E angulipennis*. It occupies, also, a somewhat higher range than its ally,—never descending (so far as I have yet observed) *below* the wooded districts, but ascending, not unfrequently, above them. Thus, in the sylvan region of the Agua Mansa, in Teneriffe, it is the dominant species, and I have likewise taken it, though more rarely, on the lofty Cumbre above it (in company with the *E crenata*), at an elevation of from about 6000 to 7000 feet. I also found it on the densely laurel-clad mountains overlooking Taganana.

#### 474 *Echinodera compacta*, n sp

*E* præcedenti similis, sed paulo obscurior, setis minus abbreviatis obsita, elytris minus rotundatis (versus humeros sensim latioribus necnon ad latera rectioribus), profundius punctato-striatis, punctis maximis—Long corp ln  $1\frac{2}{3}$

*Habitat* Canariam Grandem, in regione El Monte semel capta

I have little doubt that the single specimen from which the above diagnosis has been compiled will form the type of a distinct species peculiar to Grand Canary—where I captured it, in the region of El Monte, during the spring of 1858. So far as I can judge from the individual before me, it differs from the *orbiculata* in being of a

rather obscure hue and with its setæ less abbreviated, and in having its elytra *much* more deeply punctured (indeed quite as coarsely as in the *E. hystrix*), and considerably less rounded at the sides,—the basal region being relatively wider than is the case in that insect. Its feet, however, are but slightly expanded, and its elytra are a good deal decurved at their apex, as in the *orbiculata*.

#### 475 *Echinodera picta*, n. sp.

*E.* fere ut *E. orbiculata*, sed minor, multo lætius picta et setis fere carens, elytris paulo minus rotundatis, levius punctato-striatis, interstitiis densissime rugulosis, versus basin (præsertim circa humeros) latius albedo-ornatis, fascia postmedia distinctâ, antennis pedibusque brevibus, tarsis brevissimis, vix dilatatis.—Long. corp. lin.  $1\frac{1}{4}$ .

*Habitat* Fuerteventuram, ad Rio Palmas Aprilis incunte a. d. 1859 lecta.

The unique example described above was taken by myself, from beneath a stone, in the Rio Palmas of Fuerteventura, at the beginning of April 1859, and, apart from the peculiarity of its *habitat* (amongst species which are either essentially sylvan in their modes of life or else found in spots of a very lofty elevation), it differs so remarkably from all the *Echinodera* above enumerated that I have no hesitation, even in the absence of further material, in treating it as distinct from the whole of them. Independently of the comparatively small size of the specimen before me, which may *possibly* be accidental, the *E. picta* may be easily recognized by its much more highly coloured (and indeed prettily variegated) surface, by its freedom from erect setæ, by its elytra having the punctures of their striæ rather shallow and their interstices *densely rugulose*, and by its limbs, especially the feet, being somewhat abbreviated—the latter of which, moreover, have their penultimate joint but very slightly expanded.

### (Subfam. BARIDIIDES)

#### Genus 192 BARIDIUS

Schönherr, *Circ. Disp. Meth.* 274 (1826)

#### 476 *Baridius sellatus*

*B. oblongus*, niger, subopacus capite minutissime et leviter punctulato, rostro valido profundius punctato et basi utrinque striolato, prothorace subquadrato, mox intra apicem subito constricto, densissime et profunde punctato, punctis longitudinaliter confluentibus, in medio carinato, ad latera squamis nonnullis albidis obsito elytris striatis, interstitiis planis, squamis albidis atisque læte mai-

moratis (albâ parcius adpersis, sed in maculâ communi mediâ transverso-subquadratâ, ante hanc per suturam, necnon versus basin, densius condensatis), antennâ pedibusque breviusculis, robustis, illis rufo-piceis, his plus minus albedo atroque squamosis —Long corp ln  $3\frac{1}{2}$ —4

*Bandius sellatus*, *Schön*, *Gen et Spec Curc* viii 124 (1844)

— —, *Lucas*, *Col de l'Algérie*, 452 (1849)

*Habitat* in aridis arenosis Fuerteventuræ, rarissimus

This large and beautiful *Bandius* is at once remarkable for its coarsely punctured, longitudinally strigulose prothorax, and for its intensely black surface being prettily variegated with snowy-white scales, particularly on the elytra—where they are irregularly sprinkled towards the base, sides, and apex, but more densely concentrated along the anterior portion of the suture and in a large transverse-quadrilateral medial patch common to both. I cannot detect any real difference between the Canarian examples now before me and a North-African type of the *B. sellatus* which has been communicated by M. Chevrolat, though the latter has its prothorax a little more coarsely sculptured—caused by the punctures being more decidedly confluent, so as to make the oblique longitudinal *strigæ* better defined. It is apparently of the greatest rarity in these islands—the only two specimens which I have seen having been captured by myself, during the spring of 1859, on the hillocks of loose drifting sand in the barren region of Corralejo, at the extreme north of Fuerteventura.

(Subfam. CIONIDES)

### Genus 193 NANOPHYES

*Schönherr*, *Gen et Spec Curc* iv 780 (1838)

§ I. *Antennæ ante medium rostri insertæ, clavâ larâ. Rostrum pone antennis distincte striatum. Femora subtus bispinosa (spinâ interiori longiusculâ, acutâ)*

#### 477 *Nanophyes longulus*, n. sp.

*N.* oblongo-ovalis, angustulus, rufo-ferrugineus, nitidus flavescens—albido- et fulvescenti-pubescentis, elytris sat profunde subpunctato-striatis, fascis duabus dentatis (anticâ in medio profunde arcuatâ necnon ibidem parte suturali obscuriore terminatâ), plus minus obsoletis suffusis, pallido-ornatis, antennâ pedibusque elongatis, gracilibus, illarum clavâ sæpius obscuriore, tarsorum articulo primo longiusculo, subgracili —Long corp ln 1—1 $\frac{1}{4}$

*Habitat* Canariam et Teneriffam, super folia plantarum in humidiusculis, rarissimus

This distinct and beautiful *Nanophyes* may easily be known by its rather narrow and oblong-oval outline, rufo-ferruginous hue, and by the two zigzag (but more or less obscure or suffused) paler fasciæ with which its elytra are adorned. It is further remarkable for its antennæ being inserted *considerably before* the middle of its (basally striated) rostrum, for its femora being, all of them, bispinulose underneath (the outer tooth being very minute, but the inner one comparatively large), and for its tarsi having their first joint longer and slenderer than is usually the case in the members of this genus. Its antennal clava is much more lax, or perfoliated, than that of the following species.

The *N. longulus* is apparently of great rarity, and occurs amongst rank vegetation in rather damp spots. I have observed it hitherto only in Grand Canary and Teneriffe,—namely at Mogan, and at the edges of a small watercourse in the region of El Monte, of the former, and at Souzal of the latter. In Teneriffe it was taken also (though only a single example) by Dr. Crotch.

§ II. *Antennæ vix ante medium rostri insertæ, clavâ compactâ. Rostrum pone antennis punctato-substriatum. Femora subtilius spinâ minutissimâ armata.*

#### 478 *Nanophyes lunulatus*

*N. ovatus*, pallide testaceus, flavescenti-albido-pubescent, elytris profunde subpunctato-striatis, fasciâ media parvâ subluniforâ utinque valde abbreviatâ (interdum per suturam fractâ), necnon in interstitio quinto sæpe maculis (unâ vel duabus) parvis, nigro-ornatis. *Variat* elytris omnino pallidis (fasciâ centrali obsoletâ).—Long corp. lin.  $\frac{2}{3}$ — $\frac{3}{4}$ .

*Nanophyes lunulatus*, *Woll., Ann. Nat. Hist.* (3rd series) xi. 218 (1863).

*Habitat* Canariam Grandem, in foliis arbuscularum *Tamaris gallicæ* per margines rivuli ad Mogan crescentium deprehensus.

Known immediately from the preceding species by its smaller size, more ovate outline, and pale-testaceous hue,—the elytra being ornamented with only a minute central, laterally-abbreviated, sublunate fascia, or patch, which is occasionally interrupted at the suture so as to form two detached spots, and in rare instances is altogether obsolete and there are generally, moreover, two very obscure dashes, or abbreviated streaks, on the posterior portion of the fifth interstice. In other respects, the whole of its femora are furnished beneath with an extremely diminutive spine, and its antennæ are *more medially* inserted than is the case in the last species, and have their club shorter and more compact.

Although attached to the Tamarisk, the present insect is apparently quite distinct from the Mediterranean *N. tamarisci*, *pallidulus* (which has unarmed femora), *posticus*, and *stigmaticus*, of which the habits are similar. Indeed the first two of these are now before me, whilst the third is remarkable (*inter alia*) for its anterior femora being bispinulose, and for its elytra having merely a short, obscure, darker line towards the apex of each. And judging from the description of the *stigmaticus*, I gather that that insect must have its rostrum free from basal sulci, and its elytra more finely striated, and with only a small speck on the third interval. I am, further, informed by M. Jekel that he believes this species to be new, and perhaps identical with an uncharacterized one from Egypt.

Hitherto I have observed the *N. lunulatus* only in Grand Canary—where, on the 16th of April 1858, I brushed it, somewhat abundantly, from off the shrubs of *Tamarix gallica*, L., growing at the edges of the stream at Mogan, in the south-western district of that island.

(Subfam. TYCHILIDES.)

Genus 194. **SIBYNES**

Schönheim *Curc. Disp. Meth.* 247 (1826)

Apart from minor distinctions, the genus *Sibynes* may be recognized by its 6-jointed funiculus, and by the apices of its elytra being separately rounded-off so as to expose a small portion of the pygidium. The species are for the most part rather thick and oblong-quadrate, though with their upper surface a little flattened, their prothorax is usually somewhat bisinuated along its hinder edge, and the scales with which they are densely clothed are more or less shining and sericeous.

479. **Sibynes sericeus**, n. sp.

*S. piceo-niger*, squamis angustis aureo-fuscis sericeis densissime tectus neonon paulo albidioribus parcissime uittatus, prothorace densissime punctato, utrinque et per lineam mediam vix albidius squamoso, elytris subcrenato-striatis, interstitiis dense et profunde punctatis, antennis brevibus, ad basin, tibis versus apicem tarsisque rufo-ferrugineis.

*Var.* elytris macula mediâ communi scutellari obsoletissimâ (postice, utrinque, parte obliquâ paulo obscuriore terminatâ) vix albidioribus plus minus evidenter ornatis.—Long. corp. lin.  $1\frac{1}{3}$ – $1\frac{3}{4}$ .

*Habitat* in Lanzarota, Fuerteventura, Canaria et Teneriffa, passim.

This fine *Sibynes* is at once remarkable for the sericeous golden-brown scales with which it is densely clothed, and which are be-

sprinkled with a few very obscurely whiter ones. Its elytra have a *tendency* to be marked with a very obsolete oblique line, or patch, extending from about the disc of each to (and becoming gradually wider at) the hinder portion of the suture—an arrangement which causes the scutellary region which it encloses to appear as though formed of somewhat paler scales. The species is decidedly rare, though widely spread over the group. I have taken it at Hania, in Lanzarote, in Grand Canary, and near S<sup>ta</sup> Cruz, in Teneriffe and it was captured by Mr Gray in Fuerteventura.

### Genus 195 TYCHIVUS

(Geimai) Schon, *Circ Disp Meth* 245 (1826)

#### 480 *Tychius aridicola*, n sp

*T* fusco-piceus, squamis subflavescenti-cinereis dense nebulosus, prothorace transverso, densissime punctato, ad latera rotundato, elytris cylindrico-oblongis, profunde crenato-striatis, interstitiis minutissime punctulatis, rostro antennisque rufo-piceis, illo lineari, tereti, arcuato, longitudinaliter punctato-sulcato, pedibus robustis, oculis magnis, reniformibus—Long corp lin 2-2 $\frac{2}{3}$

*Habitat* in calcaris Lanzarotæ, Fuerteventuræ et Canariæ, rarissimus

Although the present gigantic *Tychius* is so nearly allied to the Madeiran *T robustus* that, *primâ facie*, I had regarded it as actually identical with that insect nevertheless a closer inspection has disclosed so many small differences (one of them even structural) that I believe it must be treated as specifically distinct. It differs mainly in its elytra being less inflated and convex, or more cylindric (the sides being considerably *straighter*), and in its feet being rather narrower—the bilobed third joint being perceptibly less dilated. Its scales, also, are whiter and more cinereous, or with less of a *yellowish* tinge. It appears to be exceedingly rare, and confined (so far as I have observed hitherto) to calcareous spots in Lanzarote, Fuerteventura, and Grand Canary. In the first of these I have taken it, from beneath stones, on the arid mountain-slopes between Los Valles (de S<sup>ta</sup> Catalina) and San Miguel de Teguse, in the second, in a similar locality, close to the little town of S<sup>ra</sup> Maria Betancuria, and, in the third, on the low sandy isthmus between Las Palmas and Puerto de Luz.

#### 481 *Tychius decoratus*

*T* niger, rostro (antice, præsertim in foemineis, sensim attenuato) ad apicem rufo-piceo nitido calvo, pone antennis densissime punctulato et nigro-squamoso, in fronte albido-squamoso, prothorace den-

sisissime punctulato, nigro-squamoso, lineâ mediâ (in disco interruptâ et postice dilatatâ, maculam efformante) albidâ, elytris nigro-squamosis sed læte albido-squamoso-lineatis, lineis subsuturalibus plus minus obsoletis brunneis, antennis pedibusque (squamosis) rufo-ferrugineis, illis ad apicem et his ad basin obscurioribus, oculis rotundatis, prominulis—Long corp lin  $1\frac{1}{2}$ —2

*Tychius decoratus*, *Rosenh., Die Thier Andalus* 271 (1856)

*Habitat* in intermediis Canariæ Grandis, foliis *Ononis nativis*, L., gaudens

After comparing carefully this superb *Tychius* with an Andalusian type of the *T. decoratus* of Rosenhauer, communicated by Dr Kraatz, and also with another specimen (clearly referable to the same species) which was taken by the Rev Hamlet Clark at Granada, I cannot detect any difference, either in sculpture or coloration, of sufficient importance to warrant its separation from that insect. The only points in which the Canarian examples would seem to recede from the Spanish ones are first, that perhaps they are a trifle larger (though, with only two individuals of the latter to judge from I am scarcely in a position to affirm this positively), and, secondly, that the subsutural lines of their elytra are *brown*, or more obscure, whilst the sublateral ones are (like the suture itself) quite pale and more or less confluent—an arrangement of the scales which I do not see so decidedly expressed in either of the types of the *decoratus* now before me. Even if this, however, should be peculiar to the specimens from the Canaries (of which I feel by no means certain), still I do not imagine that such a character can be looked upon as indicating more than a mere geographical variety. nevertheless, should future material from the south of Spain prove the two to be really distinct species, I would in that case propose for the Canarian one (fully enunciated above) the trivial name of *gloriosus*. The only district in which I have hitherto observed it is the great Barranco in the south-west of Grand Canary in which the little town of Mogan is situated—where, on the 16th of April 1858, I captured it rather abundantly from off a beautiful yellow *Ononis* (the *O. nativa*, L.) which is common by the roadsides, and on the dry mountain-slopes, of that particular region.

#### 482 *Tychius depauperatus*, n. sp.

*T. piceo-niger*, squamis fulvescenti cinereis sericeis (hinc inde subaeneo-micantibus) densissime tectus, rostro (antice, præsertim in fœmineis, sensim attenuato) ferrugineo, ad apicem nitido calvo, basi (unâ cum fronte) densissime punctulato squamoso, prothorace densissime punctulato, squamis per lineam mediam albidioribus, elytris subcylindrico-oblongis, subcrenato-striatis, interstitiis obsolete

et leviter punctulatis, squamis per suturam et versus latera vix albidioribus, antennis (brevibus) pedibusque (squamosis) rufo-ferrugineis — Long corp lin  $1\frac{1}{4}$

*Habitat* Fuerteventura sub lapidibus in inferioribus arenosis maritimis die 9 Apr A D 1859 specimina duo collegi

Two specimens (a male and female) of this insignificant little *Tychus* were captured by myself, from beneath stones, in a flat sandy spot at the edges of the coast-road, in Fuerteventura, about three miles to the north of Puerto de Cabras, on the 9th of April 1859. They are about the size of the common European *T. flavicollis*, but are somewhat narrower and more parallel, with their scales a little browner and more metallic, and with their rostrum and antennæ (in both sexes) shorter. The last indeed are rather singular from the second joint of the funiculus being not at all longer than the third, whilst the basal one is (relatively) a trifle more swollen perhaps than is the case in the ordinary *Tychus*. In minor particulars, I may just mention that, when denuded of its scales, the forehead of the *T. depauperatus* will be seen to be much more opaque and densely punctured than in the *flavicollis*, and its elytral striae to be less distinctly crenulated.

(Subfam RHINOMACERIDES)

### Genus 196 AULETES

Schonhenn, *Curc Disp Meth* 46 (1826)

#### 483 *Auletes cylindricollis*, n sp

*A.* rufo-ferrugineus elytris plus minus testaceis, subnitidus, pube fulvo-cinerea subdemissa sat dense vestitus, rostro elongato, utrinque punctato, capite prothoraceque profunde, dense et rugose punctatis, hoc elongato subcylindrico ad basin ipsam transversim constricto in disco breviter obsoleteque subcarinato, elytris nitidioribus, parce sed vix seriatis punctatis (punctis magnis, postice minoribus), antennis pedibusque testaceis

*Variat* fronte, prothorace utrinque in disco, elytrorum sutura femoribusque posterioribus plus minus infuscatis — Long corp lin  $1\frac{3}{4}$ — $2\frac{1}{4}$

*Habitat* in intermediis Teneriffæ et Palmæ, ad flores varios in herbis, rarissimus

The three *Auletes* here enumerated are very closely allied *inter se*, and I do not feel altogether satisfied that they should be regarded as more than varieties of a single very plastic species. Nevertheless I think it is more probable that they are distinct, though nearly related, and therefore I consider it safer not to amalgamate them.

The *A. cylindricollis* appears to be widely distributed, though spa-

ingly so, throughout the intermediate elevations of Tenerife and Palma—occurring amongst dense vegetation, in sylvan and subsylvan spots. It is remarkable for its rather elongate, subcylindrical prothorax (which is constricted at the extreme base, and but slightly widened *before* it), for its coarse punctation, which is also remote on the elytra (which are more shining than the rest of the surface), and for its longish rostrum and feet. Its colour would seem generally to be pale—merely the forehead and either side of the prothoracic disc being more or less infuscated, however, in one of my specimens, from the island of Palma, the suture, as well as the four hinder femora, are likewise darkened. My Teneriffan examples are from Las Mercedes, Souzal and the Agua Garcia.

#### 484 *Auletes anceps*, n. sp.

*A.* præcedenti affinis, sed prothorace minus cylindrico (postice sensim latiore nec ibidem transversim constricto), oculis subminoribus, punctura omnino paulo densiore ac magis grossa, elytris paulo minus nitidis, antennarum articulo secundo vix minus inflato, tarsorum articulo primo subbrevisiore.—Long. corp. lin. 2.

*Habitat* in Hierro, Februario a. d. 1853 paucè repertus.

In the shape of its prothorax, as well as in its dense punctation and its not very shining elytra, this *Auletes* is exceedingly near to the *A. maderensis* of the Madeiran Group, from which it appears mainly to differ (apart from its paler hue, on which I lay but little stress) in its slightly longer rostrum, and in the rather less abbreviated and somewhat less thickened second joint of its antennæ. From the *A. cylindricollis* of Tenerife and Palma, it may be known by its punctation being altogether rather closer and less coarse, by its prothorax being a little more expanded behind (or less cylindrical), by its elytra being somewhat less shining, by its eyes being a trifle smaller, by the second joint of its antennæ being just perceptibly less swollen, and the basal one of its feet being perhaps a little shorter. Nevertheless, considering the excessive variability of the *A. cylindricollis*, I cannot but feel doubtful whether it is more than a mere insular state of that species. As yet I have observed it only in Hierro, where I captured two examples during February of 1858.

#### 485 *Auletes convexifrons*, n. sp.

*A.* specieb. præcedentibus affinis, sed minor rostro paulo brevior nitidior graciliore minus grosse sculpturato, antennis ad basin ejus ipsissimum insertis, fronte convexiore, oculis distincte minoribus, prothorace sensim brevior ad latera subæqualiter rotundato, puncturâ omnino paulo lævior ac densior, antennis gracilioribus clavâ

tarsisque (præsertim versus apices) obscurioribus, horum articulo primo minus elongato quam in *A. conicicollis*

*Variation*  $\beta$  Rostro vix longiore, prothorace angustiore, magis cylindrico, tarsis omnino pallidis—Long corp lin  $1\frac{1}{4}$ – $1\frac{1}{2}$

*Habitat* in Canaria Grandi, rarissimus "*vari*  $\beta$ " ad Teneriffam pertinet

This appears to be a smaller insect than the *A. cylindricollis*, and its punctation is both denser and less coarse, its rostrum is rather shorter, narrower, more shining and less sculptured, and has the antennæ (which are somewhat slenderer) inserted, if anything, even still more evidently into its extreme base, its forehead is convexer, its eyes smaller, and its prothorax is more abbreviated and less cylindric—being about *equally* rounded at either side. Its colour is variable, nevertheless its feet and antennal club would seem perhaps to be more evidently infuscated. The normal state I have observed hitherto only in Grand Canary (principally in the Barranco of Mogan), but a single example captured at the Agua Mansa in Teneriffe offers slight modifications in its features (indicated above), though, I think, of scarcely sufficient importance to warrant its specific separation from the Grand-Canarian ones

### (Subfam APIONIDES)

#### Genus 197 APION

Hebst, *Kaf* vii 100 (1797)

§ I *Antennæ aut versus basin aut (rarus) pone medium rostri insertæ*

#### 486 *Apion senex*, n. sp

*A.* testaceum, fronte (angustâ), prothorace elytrorumque suturâ nigrescentibus, opacum, squamis valde robustis albidis omnino depressis (nec piliformibus) dense (in disco elytrorum postico minus dense) tectum, rostro in fœmineis tenuissimo, tereti, arcuato, valde pallido, glabro, polito, minutissime et parce punctulato (ferè, nisi oculo armato, impunctato), prothorace elytrisque ad basin inter se latitudine subæqualibus, his ovato-oblongis, subpunctato-striatis, pedibus brevibus, robustis, albido-squamosis, antennis gracilibus, pallidioribus—Long corp lin 1

*Habitat* Palmam, mense Maio a d 1858 specimina duo (fœminea) in montibus supra Sanctam Crucem deprehendi

In its general aspect and testaceous hue, this little *Apion* seems, at first sight, a good deal allied to the common European *A. malvar*, nevertheless, when closely inspected, it will be perceived to be very distinct in all its details. Thus, it is not only smaller and narrower (the prothorax, however, being *relatively* broader—of about the

same breadth posteriorly as the base of the elytra), but it is also more opaque, densely clothed, except on the hinder disc of its elytra, with large, robust, snowy-white scales (which moreover are flattened, and closely applied to the surface, instead of being narrow and piliform). the female rostrum is *very* much slenderer, brighter, paler, and comparatively unsculptured, as well as a little longer and more arcuated, its eyes are less widely separated, which causes the forehead to be narrower, its elytra are *entirely* pale, except the suture, its legs are shorter, robust, and squamose, and its antennæ are considerably slenderer and of a more pallid hue. The only two specimens which I have seen were captured by myself on the mountains above S<sup>ta</sup> Cruz, in the island of Palma, during May 1858

#### 487 *Apion vernale*.

*Attelabus vernalis*, *Fab., Ent. Syst.* 1 11 392 (1792)

*Apion vernale*, *Schön., Gen. et Spec. Curc.* 1 273 (1833)

— —, *Woll., Ins. Mad.* 409 (1854)

— —, *Id., Cat. Mad. Col.* 120 (1857)

*Habitat* in Teneriffa et Hierro, præsertim super folia *Urticæ ventris*, passim

This common European insect, which occurs also (though sparingly) in Madeira, appears to be extremely local at the Canaries. It was taken by Mr Gray and myself, from off nettles, near the Puerto Orotava of Teneriffe, during January 1858, and during the following month, by myself, in Hierro.

#### 488 *Apion delicatulum*

*Apion delicatulum*, *Woll., Cat. Mad. Col.* 120 (1857)

*Habitat* in Teneriffa, Palma et Hierro, hinc inde haud infrequens

The *A. delicatulum* (which I first detected in the north of Madeira, during August 1855) is widely spread, though apparently nowhere common, over the Canarian Group. I have taken it near the Puerto Orotava and Souzal, in Teneriffe (in the former of which localities it was also captured by Mr Gray), as well as in the Barranco da Agua of Palma, and in Hierro. In Teneriffe it was likewise met with by Dr Crotch. It may be known from the *A. vernale* by its rather longer and a little more arcuated rostrum (which is of the same breadth throughout, and is *not* widened at its extreme base, behind the insertion of the antennæ and which, moreover, is minutely alutaceous when viewed beneath a high magnifying power, instead of shining and distinctly punctulated), by its elytra being a trifle more ovate (or more expanded behind the middle), and less evidently subrecurve

and subdivaricated, at the apex, by its antennæ being slenderer, and with their funiculus-joints laxer, and by its legs being more infuscated—the femora (especially, however, the four hinder ones) being more or less picescent in the centre

#### 489 *Apion sagittiferum*

*A. fusco-piceum*, subopacum, squamis subflavescenti-albidis adspersum, rostrum in fœmineis glabro, polito, minutissime et parce punctulato, prothorace rugoso-punctato, elytris crenato-striatis, maculâ scutellari subsagittiformi et fasciâ postmediâ transversâ subrectâ, communibus, pallido-ornatis, antennis ad basin pedibusque obscure testaceis, illis versus apicem femoribusque (præsertim in medio) plus minus picescentioribus

*Var*  $\beta$  Pedibus pallidioribus (an *A. Germani* melius referenda?)

[*Ins. Fuerteventura*]—Long corp. lin.  $1-1\frac{1}{2}$

*Apion sagittiferum*, *Woll.*, *Ins. Mad.* 410 (1854)

— —, *Id.*, *Cat. Mad. Col.* 121 (1857)

*Habitat* insulas Canarienses, in Lanzarota solâ adhuc haud observatum

The *A. sagittiferum*, so abundant throughout the Madeiran Group, is almost equally common at the Canaries—where although hitherto it does not happen to have been observed in Lanzarote (the specimens from that island, as well as the generality of those from Fuerteventura, pertaining apparently to the *A. Germani*), we may be pretty certain it is universal. In the central and western portions of the archipelago it is common, but as it seems to be less so in Grand Canary, and still less in Fuerteventura, it is certainly possible that it may not occur at all in Lanzarote—where its place is supplied by the *A. Germani* (if indeed the two be really distinct from each other). My Teneriffan specimens are principally from the mountains above Sta Cruz, Taganana, and Orotava, in the last of which localities, as well as in Hierro, it was found also by Mr Gray. In Gomera I did not myself capture it, but it has been taken there lately, by Dr Clotch (who also met with it in Tenerife and Palma)

#### 490 *Apion Germani*

*A. præcedenti* simile sed vix minus opacum squamisque paulo albidioribus adpersum, rostrum in fœmineis vix latiore et paulo minus evidentius punctulato, elytris vix minus distincte albedo-pictis (fascia postmediâ sæpius magis suffusâ indeterminatâ), pedibus clarioribus, omnino pallidis—Long corp. lin.  $1\frac{1}{2}$

*Apion Germani*, *Walton*, *Ann. Nat. Hist.* xiii. 456 (1844)

— albopilosum, *Lucas*, *Col. de l'Algerie*, 408 pl. 35 f. 5 (1849)

*Habitat* in Lanzarota et Fuerteventura, præcipue (nisi fallor) super folia *Mercurialis annue* hinc inde degens

It is with the greatest hesitation that I cite this *Apion* as more than a variety of the *A sagittiferum*, and certainly I should not have ventured to do so had not my attention been lately directed to it by Mr Haliday, who has captured examples in Italy, from off the *Mercurialis annua*, which he considers to be conspecific with a pair from Lanzarote which I sent him for comparison, but distinct from the Madenian *A sagittiferum* (which appears, also, to be universal, or nearly so, throughout the Canarian archipelago) And the difficulty of recognizing it as more than a phasis of the latter is not diminished by the consideration that certain individuals from Fuerteventura seem to me (though perhaps fallaciously) to be intermediate between the two Still, it is by no means impossible that the species may be truly distinct, although so closely allied that they are occasionally difficult to separate,—a contingency which is rendered all the more probable by the fact that their habits are, I believe, different—the present one being attached, apparently, to the foliage of the *Mercurialis annua*, whilst the *A sagittiferum* occurs indiscriminately on various plants, and is extremely common (in Madeira at any rate) even amongst the lichens which clothe the crevices of the weather-beaten rocks at intermediate (and even lofty) elevations Backed, therefore, by this circumstance, as well as by the high authority of Mr Haliday, I think it is not too much to register the two as distinct, but (if such be really the case) it is at least very remarkable that I should have met with the *A sagittiferum* abundantly in six of the Canarian islands, whilst in the seventh it should be represented by a species which is so nearly akin to it as to be but just separable Be this, however, as it may, the Lanzarotan (and most, also, of the Fuerteventuran) examples (which are certainly, according to Mr Haliday, conspecific with the Algerian *albopilosus* of Lucas, and probably likewise with the ordinary European *A Germani*) differ from the normal ones of the *sagittiferum* (found throughout the remainder of the Group) in being a trifle less opaque and clothed with rather whiter scales, in the rostrum of their female sex being (if anything) just perceptibly broader and less evidently punctulated (being in fact nearly impunctate), in their elytral markings being more suffused, and consequently less defined, and in their legs being of a clearer, and altogether pallid, hue

The *A Germani* (if such be its true title) was taken both by Mr Gray and myself around Hania in the north of Lanzarote, during January 1858, and by myself, at the beginning of April 1859, in the Rio Palmas of Fuerteventura,—I believe, in all instances, from off the common *Mercurialis annua*

491 *Apion chalybeipenne*

*Apion chalybeipenne*, *Schon, ined* (teste *Boheman*)

— —, *Woll, Ins Mad* 413 (1854)

— —, *Id, Cat Mad Col* 122 (1857)

*Habitat* in Fuerteventura, Teneriffa, Palma et Hierro, passim

The *A chalybeipenne*, so well distinguished by its rather large size, elliptic outline, and submetallic surface (especially, however, of the elytra), which is sparingly besprinkled all over with decumbent cinereous piliform scales, by its somewhat elongate deeply sculptured rostrum (which has the antennæ inserted into it at a considerable distance from the base), its regularly punctured prothorax, and its subareolated anterior tibiæ, is widely distributed over the Canarian archipelago—where indeed in all probability it will be found to be universal. I have taken it near St<sup>a</sup> Cruz, Orotava, and at the Agua Mansa, in Teneriffe, in the Baia de da Agua, of Palma, and in Hierro. It was captured by Mr Gray in Fuerteventura and Palma, and by Dr. Crotch in Teneriffe. In the Madeiran Group it is universal, occurring in Madeira proper, Porto Santo, and on the Desertas.

492 *Apion calcaratum*, n. sp.

*A subopacum*, nigrum elytris obsoletissime subviolaceis vel subæneometallicis, pube minutâ cinereâ demissâ parce tectum, rostro elongato, tereti, arcuato, ad antennarum insertionem paulo incrassato et unâ cum capite prothoraceque alutaceo, illo longitudinaliter striguloso, hâc subcylindrico, profunde rugoso-punctato et postice in medio foveâ impresso, elytris grosse crenato-striatis, utrinque juxta scutellum in plagâ minutissimâ albedo-squamosis, antennis pedibusque robustis, nigris, parce cinereo-pubescentibus, tibus anticis subaeuatis.

*Mas* tibus anticis evidentius curvatis necnon ad angulum internum in spinam minutam acutissimam productis—Long corp lin  $1\frac{1}{3}$ – $1\frac{1}{2}$

*Habitat* in Hierro, in regione “El Golfo” sylvaticâ repetitum

This species might perhaps be regarded as the representative in these islands of the common European *A calduorum*, and its habits I believe are similar—the only four examples which I have seen having been brushed from off thistles, during February 1858, in the sylvan region of El Golfo, on the western side of Hierro. It is in fact about the same size as, and with much the general aspect of, the *A calduorum*, nevertheless, when accurately inspected, it will be seen to be abundantly distinct. Thus, it is more thickly clothed with a decumbent cinereous pubescence, its elytra are a little more ovate, more coarsely crenate-striated, and furnished on either side of the scutellum with an exceedingly minute dash of paler scales, its pro-

thorax is somewhat shorter and more roughly punctured, its antennal tubæ have an evident tendency, particularly in the males, to be sub-arcuated, and are also *in that sex* armed at their inner apical angle with an extremely diminutive spine\*, and its rostrum is a trifle slenderer, and is but faintly thickened at the point where the antennæ are inserted into it—instead of being (as in that insect) conspicuously tubercled

#### 493 *Apion Westwoodii*, n. sp.

*A. nigrum* elytris æneo-micantibus, squamis pallide flavo-fuscis robustis demissis parce vestitum, rostro elongato, lineari, tereti, arcuato, polito, parce punctulato, ad basin, capite prothoraceque alutaceis, hoc profunde sed parce punctato, postice in medio lineâ tenui abbreviatâ impresso, elytris grosse suberenato-striatis, interstitiis latis fere impunctatis, utrinque juxta scutellum in plagâ parvâ indistinctâ pallido-squamosis, antennis pedibusque nigris, flavo-fusco-squamosis—Long corp. lin 1-1½

*Habitat* in montibus Canariæ Grandis, rarissimum

I have much pleasure in dedicating this the most distinct and beautiful of all the Canarian *Apions* to my friend Professor Westwood, of Oxford, whose long and varied labours in the cause of Entomological science have justly placed him in the foremost rank of the European naturalists. It may immediately be known by the robust, brownish-yellow or dirty yellowish-white, decumbent piliform scales with which it is sparingly clothed, by its otherwise dark hue, though more or less brassy and shining elytra (which have their striæ deep and coarse, though very obscurely crenated), by its alutaceous head and prothorax (the latter of which is also deeply, but not very closely, punctured), by its almost unsculptured interstices, and by its long, slender, linear, arcuated, bright, and finely punctulated rostrum.

The *A. Westwoodii* is peculiar, so far as I have observed hitherto, to the mountains of Grand Canary—where, during the spring of 1858, I captured it in the region of El Monte, and also (though more sparingly) on the lofty Pinal of Tarajana, above San Bartolome.

#### § II *Antennæ aut versus aut ante medium rostri insertæ*

#### 494 *Apion tubiferum*

*Apion tubiferum* (Dej.), *Schön*, *Gen. et Spec. Curc.* 1 284 (1833)

*Habitat* in Canaria et Hierro, in montibus, rarissimum

\* This character is however, indicated (though less distinctly) in the *carduorum*, as well as in certain other European species,—as, for instance, in the *æneum* and *radiolus* and very obscurely in the male of *onopordi*. It likewise exists in the *chalybeipenne*.

I can detect no specific difference between four examples of an *Apion* now before me and two of the *A. tubiferum*, Schon., from northern Africa. The Canarian ones are certainly more æneous, and the erect setæ with which they are clothed are not quite so white, also their prothoracic punctures are a trifle less coarse and less confluent, but none of these are characters of any real importance. The only point indeed in which the least approach to a structural difference seems to be indicated, is that the rostrum (of both sexes) may possibly be a little shorter in the Canarian specimens, but as the entire individuals happen to be a trifle smaller, and even the length of the rostrum is subject to slight variations in those species in which that organ is so largely developed, I do not lay much stress upon this fact. Nevertheless if further material should hereafter prove the two species (however nearly allied) to be really distinct, I would in that case propose the name of *tubuliferum* for the Canarian one, in order to express its evident affinity with the *tubiferum*.

Of the four Canarian examples which have as yet come beneath my notice, three were captured (I believe, from off a species of *Cistus*) in the sylvan district of El Golfo, on the western side of Hierro, during February 1858, and the remaining one, in the following April, on the lofty Pinal of Tajajana, above San Bartolomé, in the centre of Grand Canary. It would appear, consequently, to be of the greatest rarity in these islands.

#### 495 *Apion austrinum*, n. sp.

*A. angustum*, nigrum elytris obsolete (vix perspicue) submetallicis, subopacum, squamis cinereis demissis piliformibus parce vestitum, rostrum elongatum, lineari, tereti, arcuato, polito, minutissime et parce punctulato, prothorace parvo, subcylindrico, punctato, fovea centrali antice evanescente canaliculato, elytris ellipticis (postice acutiusculis), leviter punctato-striatis, antennis gracilibus, ad basin rufescentioribus.—Long. corp. lin.  $1\frac{1}{2}$ .

*Habitat* Gomera, a Dom W. D. Crotch semel captum.

The only specimen which I have seen of this insignificant little *Apion* was captured by Dr. Crotch, during the spring of 1862, in Gomera. In its small size, and narrow, elliptic outline, it has much the appearance of the common European *A. semiculus*, it is, however, rather more ovate (or less strictly elliptic) and less clothed with cinereous pubescence; its rostrum is apparently a little shorter and brighter (or less alutaceous) and its prothorax is a trifle more cylindrical. The position of its antennæ (at any rate in the sex before me) is sufficiently equivocal to render it doubtful to which of my two Sections it should be referred—being implanted distinctly be-

hind the middle of the rostrum I think, however, it is perhaps better placed in this situation than elsewhere

#### 496 *Apion fallax*, n sp

*A* elongato-ovatum, subopacum, nigrum elytris plus minus obscure subæneo-viridi-micantibus, ubique subtilissime alutaceum et pube minutâ cinerei demissâ parce vestitum, rostro elongato, lineari, tereti, dense punctato, capite prothoraceque profunde et dense punctatis, hoc conico, postice in medio foveâ punctiformi impresso, elytris subdepressis, crenato-striatis, interstitiis parce et subtilissime punctulatis, antennis pedibusque robustis, nigris — Long corp lin  $1\frac{1}{2}$ —2

*Habitat* in Lanzarota, Canaria, Teneriffa, Palma et Hierro, sat frequens

Apparently the representative in these islands of the common European *A volaceum*. It is, however, on the average, larger than that insect, and the colour of its elytra is never cyaneous-blue, but of a more or less obscure brassy-green, its rostrum is rather longer, and, together with the head and prothorax, more thickly, though somewhat more finely, punctured, its prothorax is more conical, or less rounded at the sides, and its elytra are a trifle more depressed, and with their striae much less coarsely crenated. In its general *primâ facie* aspect it is perhaps closer still to the (nearly allied) *A hydrolapathi*, nevertheless its longer rostrum and somewhat robust limbs, in conjunction with its entire freedom from a prothoracic channel (which, as in the *volaceum*, is replaced by a small central punctiform fovea) and its more flattened, differently coloured elytra, the interstices of which (though minutely so) are more evidently punctulated, will sufficiently distinguish it from that species also.

The *A fallax* is probably universal throughout the archipelago, though as yet it has been observed only in Lanzarote, Grand Canary, Teneriffa, Palma, and Hierro. My Grand-Canarian examples are principally from the region of El Monte, the Teneriffan ones from the vicinity of S<sup>ra</sup> Cruz, Souzal, and Orotava, and the Hierro ones from the hills to the westward of Valverde. In Teneriffa it was taken also by Mr Gray and Dr Crotch, the former of whom captured it likewise in Palma.

#### 497 *Apion rotundipenne*

*Apion rotundipenne*, *Woll, Ins Mad* 415 tab viii f 6 (1854)

— — —, *Id, Cat Mad Col* 122 (1857)

*Habitat* in Canaria, Teneriffa, Palma et Hierro, præsertim in cultis vulgaris

This *Apion*, which is most abundant, and universal, in the Madeiran Group (occurring in Madeira proper, Porto Santo, and on the Desertas), is equally common at the Canaries—where, although it does not happen as yet to have been observed in Gomera, it is doubtless universal throughout the central and western portions of the archipelago. Whether, however, it exists in the two eastern islands, Lanzarote and Fuerteventura, is perhaps questionable, as I have myself collected with great assiduity in both of them and have not detected it. But in Grand Canary, Teneniffe, Palma, and Hierro I have met with it in profusion—chiefly in semicultivated spots of intermediate elevations. My Teneriffan examples are principally from the vicinity of S<sup>ta</sup> Cruz, Taganana, Las Mercedes, the Agua Garcia, and Orotava, and the Palman ones from the Barranco da Agua. In Teneriffe it was found also by Dr. Crotch, and in Palma and Hierro by Mr. Gray. Its anteriorly acute and posteriorly rounded outline, in conjunction with its small and narrow ~~prothorax~~, dark hue but more or less metallic elytra (~~which are~~ exceedingly convex, and have their striae ~~very~~ coarsely crenate), and its slender rostrum and limbs, will ~~at once~~ distinguish it from the other species here enumerated.

498 *Apion ceuthorhynchoides*, n. sp.

*A. curtulum*, nigrum elytris obsoletissime subcyanescentibus, squamis cinereis demissis piliformibus parce vestitum, rostro breviusculo, crassiusculo, lineari, tereti, arcuato, parce punctulato, capite prothoraceque alutaceis, illo inter oculos magnos longitudinaliter striguloso, hoc brevi transverso convexo punctato fovicâque centrali antice evanescente canaliculato, elytris nitidioribus, convexis, subquadrato-oblongis, punctato-striatis.—Long. corp. lin. 1.

*Habitat* Teneriffam, a Dom. Gray prope Portum Orotavæ Januario A. D. 1858 semel repertum.

Like the *A. austriacum*, this little *Apion* is hitherto unique,—a single example, captured by Mr. Gray near the Puerto Orotava, in the winter of 1858, being the only one which has as yet come beneath my notice. It may, however, be easily known from the other species here enumerated by its small size and thickish form, by its abbreviated and ventricose prothorax, convex, more shining, and obsoletely subcyanaceous elytra (which are of a rather elongate-quadrate outline, and a good deal obliquely-truncated at the shoulders), and by its somewhat short and thick (though linear) rostrum. Altogether it is a little suggestive *primâ facie* of a minute, dark, elongate *Ceuthorhynchus* (particularly of those species allied to the common Eu-

ropean *C contractus*)—a circumstance which has suggested its trivial name

#### 499 *Apion umbrinum*, n sp

*A nigro-plumbeum*, subopacum, squamis cinereis demissis piliformibus parce vestitum, rostro elongato, lineari, tereti, arcuato, leviter punctulato, capite prothoraceque alutaceis, rugose punctatis, illo in fronte longitudinaliter strigoso, hóc subconico tenuiter canaliculato, elytris crenato-striatis, antennis pedibusque gracilibus, illis ad basin ipsissimam rufo-ferrugineis —Long corp lin  $1\frac{1}{3}$ – $1\frac{1}{2}$

*Habitat* Canariam, Teneriffam et Palmam, in sylvaticis subsylvaticisque hinc inde vulgaris

A species somewhat resembling the common European *A ononis*, but rather larger and more pubescent, with the prothorax a little more closely and coarsely punctured, with the elytra wider at the shoulders, and with the limbs longer. This last character is particularly evident as regards the feet, the basal joint of which is very perceptibly more elongated. It appears to be a common insect throughout the sylvan and subsylvan regions of Grand Canary, Teneriffe, and Palma, occurring amongst thick vegetation in shady spots. My Grand-Canarian specimens are principally from the district of El Monte, and the Teneriffan ones from Las Mercedes, Souzal, and the Agua Garcia. In Teneriffe it was taken also by Dr Crotch

#### 500 *Apion longipes*, n sp

*A plumbeum* elytris magis cærulescentibus, squamis cinereis demissis piliformibus dense vestitum, rostro in fœmineis elongato, lineari, gracili, subnitido, impunctato, capite prothoraceque alutaceis, illo in fronte grosse longitudinaliter strigoso, hóc rugose punctato et postice canaliculato, elytris crenato-striatis, pedibus (præsertim in sexu masculino) elongatis

*Mas* antennis sæpius fere ad clavam (minus abruptam) rufo-testaceis, tibis anticis robustis, subbicurvatis

*Fœm* antennis ad basin solam rufo-testaceis (clavâ abruptiore), tibis anticis gracilibus, rectis —Long corp lin  $1\frac{3}{4}$ –2

*Obs*—Species *A voraci* valde affinis, sed paulo major pubescentior, pedibus omnino longioribus, tarsorum articulo primo sensim longiore

*Habitat* in sylvaticis subsylvaticisque Teneriffæ et Palmæ, sat vulgaris in hac, à DD Gray et W D Crotch parce repertum, mihi non obvium

The present large *Apion* is so closely allied to the common European *A vorax*, that I feel doubtful whether it should be treated as more than a slightly altered state (brought about perhaps by local influences) of that insect. It seems to possess all the distinctive

features of the *A vorax*, only *exaggerated*, and mainly differs from it in being a little larger and more pubescent, and in having its legs still longer. This last peculiarity is very evident as regards the tarsi, the basal joint of which is very perceptibly more lengthened. It appears to be an abundant species in the intermediate districts of Teneriffe, occurring in sylvan and subsylvan spots thus, I have taken it commonly at Taganana, Souzal, and the Agua Garcia. A single example was also captured by Dr. Crotch, and several more, during February 1858, by Mr. Gray, in the island of Palma.

(Subfam. ERIRHINIDES)

Genus 198 **SMICRONYX**

Schöenherr, *Gen. et Spec. Curc.* iii. 423 [script *Micronyx*] (1836)

The genus *Smicronyx* possesses most of the characters of *Tychius*, nevertheless its more sunken eyes and its basally approximated claws (those of the latter being distant, and furnished with a small appendage between them) will, apart from minor features, usually suffice to separate it therefrom. The species are, on the average, still smaller than the *Tychi*, their surfaces are more or less sparingly variegated with scales, their rostrum is long, filiform, arcuated, and slender, the punctation of their prothorax, instead of being deep and dense, is shallow and remote (the punctures moreover being of a rather peculiar kind, and often merging anteriorly into very minute granules), their elytral striæ are (at any rate, I believe, in most instances) almost simple, or uncrenulated, the joints of their funiculus are more closely compacted together, and the extreme apices of their tibiae have the outer angle more prominent and spinulose, and the inner one also generally somewhat more powerfully armed with a small horizontally-directed spine.

501 **Smicronyx albosquamosus**

*S. niger*, squamis maximis latis albidis et dilute albidis dense tectus, prothorace angustulo, leviter punctulato, elytris subparallelis, striatis, antennis pedibusque concoloribus, squamosis.

*Var. β vicinus*. Multo parcius squamosus (squamis albidioribus præsertim perpaucis), prothorace alutaceo sed paulo remotius leviusque punctato.—Long. corp. lin. 1-1½.

*Tychius albosquamosus*, Woll., *Ins. Mad.* 345 (1854).

—, *Id.*, *Cat. Mad. Col.* 111 (1857).

*Habitat* Teneriffam, in sylva “Agua Garcia” semel tantum lectus. *varietatis β* specimina duo (sc. prope Orotavam Teneriffæ necnon in ins. Hierro, inter mare et oppidum Valverde) capi.

A single specimen of this insect, captured (dead) from beneath a stone, in the wood of the Agua Garcia of Teneriffe, during March 1858, seems to agree precisely with the unique example of my "*Tychius albosquamosus*" which I found (likewise dead, and under a stone), in May 1850, on the Deserta Grande of the Madeiran Group. At least, after a very accurate comparison, I cannot detect a real difference between the two, and I have therefore regarded them as identical. The *S albosquamosus* recedes from the *pauperculus* in being a little larger and more parallel, in the colour, both of its body and limbs, being (when denuded of the scales) completely black in its prothorax being a trifle more sparingly and less roughly punctured, and in its scales being not only very much larger, wider, and more robust, but likewise of a more chalky white (though apparently with brownish ones intermixed).

The examples, four in number, which in the above diagnosis I have treated as the "*var*  $\beta$ " may possibly prove to be specifically distinct from their supposed type. Two of them were taken by Mr Gray near Orotava in Teneriffe, another was captured by myself in the same locality, and the remaining one I met with (on the 11th of February 1858) on the ascent from Port Hierro to Valverde, in the island of Hierro. They differ in being very much less densely squamose (the paler scales, more particularly, being few in number), and in their prothorax being a little more sparingly and finely punctured. Still, in the absence of further material (both of them and of their supposed type) to judge from, I think it would scarcely be safe to consider them as more than a variety of the *albosquamosus*.

#### 502 *Smicronyx pauperculus*, n. sp.

*S. niger*, squamis elongatis dilute albidis et fuscis parce nebulosis, prothorace angusto, sat dense ruguloso-punctato, elytris fuscicinctibus, striatis, femoribus tibusque rufo-ferugineis.—Long corp. lin.  $\frac{7}{8}$ – $1\frac{1}{4}$ .

*Habitat* in Canaria et Teneriffa, in locis inferioribus et intermediis, passim.

This insect, which seems to be one of the most minute of the Canarian *Curculionidae*, will probably be found to be universal, throughout at all events the central and western islands of the archipelago. Hitherto, however, I have observed it only in Grand Canary and Teneriffe,—namely in the region of El Monte and at Teror of the former, and about S<sup>ta</sup> Cruz and Orotava of the latter. It is apparently, on the average, a little smaller than the *S albosquamosus* its

elytra are not quite so parallel at the sides, its colour is less black (the elytra being more or less fuscous, and the femora and tibiae pale rufo-ferruginous), its prothorax is somewhat more roughly and closely punctured, its entire surface is much more sparingly clothed with scales, though proportionally perhaps a trifle more variegated, and the scales themselves, in which the brown ones preponderate, will be seen (when viewed beneath the microscope) to be narrower and less robust

• Genus 199 **PROCAS**

Stephens, *Ill Brit Ent* iv 90 (1831)

503 **Procas Steveni**.

*Curculio picipes*?, *Mshm, Ent Brit* 272 (1802)

*Procas picipes*?, *Steph, Ill Brit Ent* iv 91 (1831)

*Erihinus Steveni*, *Schon, Gen et Spec Curc* iii 287 (1836)

*Procas Steveni*, *Schon, Id* vi 387 (1842)

*Habitat* in Fuerteventura et Palma, rarissimus

Although widely distributed over the Group, the present insect appears to be of the greatest rarity in these islands, the only two Canarian examples which I have seen having been captured in Palma and Fuerteventura respectively,—one by the Rev R T Lowe, at the end of May 1858, high up in the Barranco de Nogales, near the village of Galga, in the former, and the other by myself, on the 31st of the following March, at Oliva, in the latter. It seems probable that the *P Steveni* is not specifically distinct from Marsham's *picipes* (which of course is the prior name), nevertheless, since the former is at any rate the title under which the individuals from southern Europe are usually quoted, I have thought it safer, in the absence of further material for a more critical examination to cite it accordingly

(Subfam CLEONIDES)

Genus 200 **LIXUS**

Fabricius, *Syst Ent* ii 498 (1775)

504 **Lixus anguinus**

*Lixus anguinus*, *Linn, Syst Nat* i ii 610 (1767)

— —, *Schon, Gen et Spec Curc* iii 11 (1836)

— —, *Brulle, in Webb et Berth (Col)* 72 (1838)

*Habitat* in Canaria et Teneriffa, rarissimus

The only two Canarian examples which I have seen of the present *Lixus* are not very typical of the *anguinus* (of southern Europe and northern Africa), being not only smaller than specimens (from Sicily and Algeria) now before me but having likewise the produced apices

of their elytra less divergent (indeed almost straight) and their prothorax rather more densely variolose. Still, in every other respect, particularly coloration, they agree with the *anguinus*, and I do not think therefore that it would be safe to treat them as more than small varieties of that insect. And moreover, as M. Brullé registers the species as Canarian, it is at least possible that Messrs Webb and Berthelot's examples were more normal in their characters, or, at any rate, the fact of its having been thus recorded gives an additional *probability* to the correctness of my determination, and likewise (apart from this) an additional reason for the desirability of admitting the species, even independently of my own specimens, into this Catalogue. My own belief, however, is that the latter are truly referable to the *anguinus*, and that the slight peculiarities which they present indicate no more, at the utmost, than a mere geographical variety. One of these examples I captured in the south of Grand Canary, and the other near S<sup>ta</sup> Cruz in Teneriffe.

#### 505 *Lixus anguiculus*

*Lixus anguiculus et lineatus*, *Schon, Gen et Spec Curc* iii 11, 12 (1836)

*Habitat* Fuerteventuram, a Barone "Castello de Paiva" nuper communicatus

Of this *Lixus* also I have seen as yet but two Canarian examples, both of which have lately been communicated from Fuerteventura by the Barão do Castello de Paiva. Although not in a very satisfactory state of preservation, I can detect no traces whatever of paler lines down the disc of their elytra (though there is a broad and conspicuous one along either side), whilst their other differences from the *anguinus*, such as they are, accord so well with the diagnosis of the (Grecian and Egyptian) *anguiculus* that I have little hesitation in referring them to that species. Apart from their want of elytral lines, their rostrum is just perceptibly more shining and convex than is the case in the *anguinus*, their prothoracic keel is a trifle more evident, and the acuminate apices of their elytra are straighter, or less divergent. They are also perhaps a little narrower, though I think scarcely shorter, in which latter respect, consequently, they do not accord precisely with the *published diagnosis* of the *anguiculus*.

#### 506 *Lixus Chawneri*.

*Lixus Chawneri*, *Woll, Ins Mad* 350 (1854)

— —, *Id, Cat Mad Col* 112 (1857)

*Habitat* Fuerteventuram, Martio exeunte A D 1859 ad Olvham captus

A single example only of this insect has hitherto come beneath my observation in these islands. It was captured by myself, on the 31st of March 1859, at Oliva in Fuerteventura, and seems to differ in no respect from the Madeiran specimens.

### 507 *Lixus guttiventris*

*Lixus guttiventris* (Germ.), *Schön*, *Gen et Spec Curc* vii 469 (1843)

*Habitat* in Lanzarote et Fuerteventura, præsertim ad folia *Arundo donax*, rarior

I am informed by M. Jekel, who examined carefully one of my Fuerteventuran specimens of this *Lixus*, that he believes it to be correctly referred to the *guttiventris* of Schonheir—a species which occurs in Sicily and the north of Africa, and it seems to accord sufficiently well with the diagnosis to leave little doubt in my own mind on the subject. Its comparatively thick and cylindric body (the elytra being conjointly rounded, or obtuse, at their apex), combined with its rufo-ferruginous antennæ and feet, its very *evenly* punctured striæ, and the fact of its upper surface being *uniformly* clothed with a minute cinereous pubescence and frequently with a yellowish pollinosity, there being no lateral band of whiter scales, will serve to distinguish it. It appears to be exceedingly rare, and confined (so far as I have observed hitherto) to Lanzarote and Fuerteventura,—in the former of which I captured a specimen between Haria and Magui, during January 1858, whilst, in the latter, I brushed four more from off some plants of the *Arundo donax*, in the Rio Palmas, early in April of the following year.

### Genus 201 BOTHYNODERES

Schonheir, *Curc Disp Meth* 147 (1826)

### 508 *Bothynoderes* Jekeli

*B. cylindricus, niger, minutissime cinereo-squamulosus, rostris tri-*

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\* I should add that M. Buille includes the *Lixus angustatus* in his list, compiled for MM Webb and Berthelot's volume. It is far from impossible that it may occur at the Canaries, nevertheless I cannot admit it into the present Catalogue seeing that it is common in Madena, and that I have (as already stated) the most conclusive evidence of Mr Webb's having mixed up his Madeiran and Canarian material in the most inaccurate manner. I feel, therefore, that it is exceedingly probable that the example (or examples) on which its admission into the fauna rests was in reality brought by Mr Webb from Madena—a supposition which is rendered the more reasonable when we consider that his excessively meagre collection (principally Canarian) contained so many species (such as the *Scarites olivaceus* and the *Harpalus consentaneus*) all of them abundant in Madeira but which do not exist either amongst my own enormous amount of specimens amassed in the whole seven islands of the archipelago, or in the various smaller collections formed by others, which have been communicated to me.

angulari, densius albido-squamoso sed ad apicem nudo polito, tenuiter carinato, prothorace æquali, apice bisinuato, minutissime punctulato punctisque majoribus parcius adperso, ad latera (subrecta) paulo densius pallidiore, elytris striato-punctatis, squamulis in interstitiis lineas obscuras necnon etiam in stria suturali linea interrupta efficientibus, utroque ad apicem minute divaricato necnon longe ante apicem maculâ parvâ mediâ ornato, antennis basi rufo-piceis — Long corp lin  $3\frac{1}{2}$ – $5\frac{1}{2}$

*Cleonus* Jekeli, *Woll, Ann Nat Hist* ix 441 (1862)

*Habitat* Lanzarotam, Fuerteventuram et Canariam, in aridis inferioribus sub lapidibus degens

In its short, conical rostrum and the elongate second joint of its funiculus this insect belongs to Schonherr's subgenus *Bothynoderes* (recently elevated to a genus by Lacordaire), of which the European *Cleonus brevis* Olivier is the type. I have named it after M. Jekel, who informs me that it is unquestionably new,—differing, *inter alia* from its cognate species “in having its rostrum more deeply emarginated at the tip so as to expose a larger portion of the mandibles.” It occurs for the most part in low and sandy positions, particularly near the coast,—under which circumstances I have taken it, in profusion in Lanzarote and Fuerteventura, as also, though more rarely, at San Juan, in the south-east of Grand Canary. In Lanzarote it was found likewise by Mr. Gray and M. Hartung, and from Fuerteventura it has been obtained by the Barão do Castello de Paiva.

The *B. Jekeli* is at once remarkable for its cylindrical outline, and for its surface being sparingly clothed with excessively minute cinereous scales, or pubescence, by its prothorax being subcylindrical and almost *even*, though densely sculptured with a double system of small and larger punctures, and considerably bisinuated along the anterior edge, and by its elytra (which are but very minutely divaricated at their apex) having the delicate pubescence of their interstices obscurely condensed into dull longitudinal lines, whilst even the *stria* of each next to the suture is likewise squamose, but at the same time *interrupted by the punctures* so as to form (in unrubbed specimens) a broken-up line.

## Genus 202 CLEONUS

Schonherr, *Curc Disp Meth* 145 (1826)

### 509 *Cleonus* Armitagui, n. sp.

*C.* cylindrico-fusiformis, niger, subnitidus, parvissime albido-squamoso-pictus, rostris cylindrico, subarcuato, minute punctulato, postice utrinque longitudinaliter impresso prothorace subæquali

(utrinque leviter impresso necnon apice in medio foveâ parvâ, ante cannulam tenuissimam brevissimam positâ, notato), scabroso-ruguloso (vix punctulato) et tuberculis magnis paucissime adsperso, albido tincto (lineâ mediâ tenuiore, rectâ), per basin bisinuato, elytris convexis (versus scutellum depressionibus), leviter punctatostriatis et tuberculis magnis irregularibus remotis (præsertim antice necnon in limbo) asperatis, singulis (ad apicem vix productis) fasciis 4 valde obliquis albidis (longe ante suturam terminatis) ornatis, antennis (sensim pone apicem rostri insertis) basi piceis — Long corp lin 7

*Habitat* Teneriffam, mihi non obviis specimen unicum tempore vernali a d 1848 cepit Rev<sup>us</sup> Dom W J Armitage, ejus in memoriam (heu ! defendam) nomen triviale proposui

The unique example from which the above diagnosis has been compiled was captured in Teneriffe during the spring of 1848 by my lamented friend and associate, the late Rev W J Armitage, the species having altogether escaped my own observation in these islands. Its general appearance is almost as much that of a *Lixus* as of a *Cleonus*, so that it is not entirely evident to which group it should be assigned\*. It may easily be known from the other Canarian *Cleoni*, as yet detected, by its cylindric-fusiform outline, and by its dark and rather shining surface being roughened with large, remote tubercles (some of which are transversely subconfluent, so as to form *placæ* on the anterior portion of the elytra) and sparingly ornamented with white scales. These last are condensed on the prothorax into three lines (the central one of which is straight and narrow, whilst the lateral ones are broad and irregular), and down the disc of each of the elytra into four very oblique fasciæ (which are greatly abbreviated both towards the suture and margin). Its antennæ are inserted somewhat further from the apex of its (cylindrical, subarcuated, minutely punctured, and on either side longitudinally-impressed) rostrum than is usual with the true *Cleoni*, its prothorax is compa-

\* Of the close affinity of these two genera, although widely separated in Schonherr's most unnatural system there cannot be the smallest doubt, and it is therefore satisfactory to find that Lacordane has recently, in his admirable volume, placed them in juxtaposition. Indeed M Jekel, who examined the present insect for me very critically, returned it with the following observation: "As a *Cleonus* nothing to my knowledge approaches it, but it is allied to some *Lixus* from continental Africa (from Senegal down to the Cape of Good Hope) in which the rostrum is short. It seems to me that nobody has yet been able to trace out a real line of demarcation between *Lixus* and *Cleonus*, and the transposition of many of the species even by Schonherr himself, proves how difficult it is to do so, and how much the group requires revision. After a close inspection of the example which you have sent me, I have been much struck with its *Lixus-like* appearance, and (if a *Lixus* at all) I would place it near to the *L. vetula*, Fab, and other cognate forms."

*relatively* even (being but slightly impressed on either side, and with a small shallow fovea down the centre in front—immediately behind which there is a very minute, abbreviated, and slender discal keel), and its elytra, which are but finely punctate-striate, are hardly at all produced (separately) at their extreme apices

The *C. Armitagei* may be presumed to be extremely rare, and it is, therefore, the more remarkable that it should have been accidentally met with by Mr Armitage during his few days' sojourn in Teneriffe

#### 510 *Cleonus variolosus*, n. sp.

*C. tabido* et *excoriato* affinis, sed magis cylindricus, rostro minus alte carinato, prothorace longiore, subcylindrico, magis æquali sed profunde varioloso-punctato (variolis maximis, remotis, plus minus subconfluentibus), basi in medio multo minus ante scutellum producto (fere simpliciter rotundato), elytris subcylindricis, seriatim (vix striato-) punctatis (punctis maximis) sed fere absque lacunis, fasciis duabus brevibus transversis nigris in nus oblique atque haud conicis ornatis, ante apicem minus constrictis necnon ad apicem ipsum singulatim obtusioribus (i. e. singulis minus acuminatis), pedibus sensim robustioribus—Long. corp. lin. 5-6

*Habitat* in arenosis inferioribus Fuerteventuræ, rarissimus etiam in insulâ parvâ “Lobos” dicta exemplar unicum collecti

Of the present *Cleonus* I have seen but two examples,—one of which was taken by myself in a low sandy spot close to Puerto de Cabras in Fuerteventura, and the other on the little rock of Lobos off the extreme north of that island. It is allied to the *C. tabidus* and *excoriatus*\*, but is more cylindrical, with its prothorax longer and less uneven (though more deeply pitted with enormous, but remote, punctures or varioles), and very much less produced in the centre behind, and with its elytra (which are obtuser, or less constricted posteriorly, and very much less separately-acuminated at their extreme apices) more coarsely punctured though less deeply striated, with their two dark fasciæ more developed but less regular or defined, less conical and less oblique, and with the elongate longitudinal impressions (or *lacunæ*) which are so conspicuous in that species almost or entirely obsolete. Its legs, likewise, are a trifle more robust, and the keel of its rostrum is not quite so elevated

\* M. Jekel, after examining the present insect, wrote to me as follows: “It is a new *Cleonus* belonging to the group of *excoriatus*, *crucis*, &c., much allied to an undescribed species from the south of Spain (*gaditanus*, Rambur, *in litt.*) and so closely related to another from Barbary (likewise unpublished), in Mr Bowring's collection that I am inclined to regard the two as but varieties of a single species.”

511 *Cleonus tabidus*.Lixus tabidus, *Oliv*, *Ent* v 83 262 (1807)Cleonus tabidus, *Schon*, *Gen et Spec Cuc* 11 192 (1834)Cleonis obliqua, *Hartung* [nec Ill], *Geolog Verh* 11 Lanz und Fuent 141

*Habitat* Lanzarotam, Fuerteventuram, Canariam et Teneriffam, sub lapidibus in aridis, passim

I believe that the Canarian *Cleonus* here referred to is correctly identified with the *tabidus* of Olivier, a species which is not uncommon in southern Europe. At any rate it accords precisely with the description given in Schonherr's work, and also with a Sicilian example which I have received from M Jekel. Nevertheless I should add that it agrees almost equally with the diagnosis of the *exornatus*, as well as with two specimens from northern Africa, thus named, which M Jekel has likewise communicated to me. Indeed so exactly do these supposed types tally *inter se*, that I have not the slightest hesitation in regarding them as conspecific with each other, and as there is absolutely no character whatever, that I can detect, in Gyllenhal's long descriptions by which the two can be separated, I should doubt their being in reality distinct. Be this, however, as it may, I am inclined, on the whole, to refer the Canarian insect to the *tabidus*—which moreover, being prior in publication to the *exornatus*, will be the name which must eventually be retained if the two should hereafter be acknowledged as identical.

The *C tabidus* (as here determined) is often abundant in dry spots of low and intermediate elevations, in Lanzarote, Fuerteventura, Grand Canary, and Teneriffe, but I have not as yet observed it in the three western islands of the Group. My Lanzarotan examples are principally from Yaiza and the vicinity of Haria, the Fuerteventuran ones from Puerto de Cabras, the Grand Canarian ones from Las Palmas and Arguanguin, and the Teneriffan ones from Laguna. In Lanzarote it was taken also by M Hartung, and is evidently the *Cleonus* referred in his Catalogue (which was prepared for him by Dr Heer) to the *obliquus*, Illiger—a species, however, from which it is totally removed, not merely in *facies* and markings but in several of even its structural details (amongst which the shape of the eyes should be especially noticed). From Fuerteventura and Teneriffe it has also been sent by the Barão do Castello de Paiva.

## Genus 203 RHYTIDODERES

Schonherr, *Cuc Disp Meth* 149 [script *Rhytideres*] (1826)

I believe that the present group is truly distinct from *Cleonus*,

from which it differs, mainly, in its antennæ and (regularly sulcated) rostrum being longer, in its prothorax being smaller, narrower, squarish cylindric, simple at the base (or unsinuated), and deeply grooved above with numerous longitudinal more or less flexuose *sulci* (which are consequently separated *inter se* by more or less curved and elevated *plicæ*), by its scutellum being more conspicuous, by its elytra being almost parallel at the sides, with their shoulders sub-parallel (though obtuse), and with their alternate interstices obscurely raised, and by its claws being distant at their base, and free, instead of approximated and soldered. M Duval has redescribed it under the name of *Diastochelus*

### 512 *Rhytidoderes sculus*

*Cleonis plicata*, Brulle [nec Oliv], in Webb et Berth (Col) 72 (1838)

*Cleonis sculus* (Dupont), Schon, Gen et Spec Cure vi 61 (1842)

— *plicatus*, Woll, Ins Mad 401 (1854)

— —, Id, Cat Mad Col 119 (1857)

*Cleonis plicata*, Hartung, Geolog Verh. Lanz und Fuert 141

*Habitat* in Lanzarote, Fuerteventura, Canaria et Hierro, rarissimus

The present insect is very nearly allied to the *R. plicatus* of southern Europe, of which I had formerly regarded it as a mere geographical state, but, upon a closer inspection, it appears to me now to be truly distinct, and the more so since both the Canarian and Madeiran individuals agree in every respect with those from Sicily,—which at any rate indicates that it cannot be a *local* phasis peculiar to the last of those countries. It differs from the *plicatus* in being altogether a trifle narrower, in its prothorax having the outer *sulci* not quite so elevated and the two inner ones more strongly biflexuose (being bent inwards not merely posteriorly but also *in front*, somewhat after the fashion of a figure of 8) and wider apart, particularly behind (where the included space is obsoletely keeled), and by its elytra having the punctures of their striæ more numerous and considerably smaller (a fact which is very evident when the scales are removed), and their alternate interstices less conspicuously raised. Its rostrum, also, is just perceptibly slenderer.

The *R. sculus* is rare at the Canaries, though widely spread over the archipelago—where it will almost certainly be found to be universal. I have taken it in Grand Canary and Hierro, and it was found by the Rev R T Lowe in Fuerteventura (from whence also it was obtained by the Barão do Castello de Paiva) and by M Hartung in Lanzarote. In the Madeiran Group (though wrongly recorded by me as the *plicatus*) it is universal—occurring, sparingly, in Madena proper, Porto Santo, and on the Desertas.

## (Subfam HYPERIDES )

Genus 204 **ALOPHUS.**Schonheil, *Cure Disp Meth* 166 (1826)513 **Alophus magnificus**, n sp

*A* fusco-niger, squamis fuscis densissime tectus albidioribusque pictus, et setulis cinereis demissis parcissime irroratus, rostro elongato, indistincte punctulato, supra necnon ad latera longitudinaliter sulcato, prothorace parvo, subcylindrico-conico, profunde sed parce punctato (punctis maximis) et densissime interpunctulato (quasi granulato), canaliculâ mediâ profundâ (antice et postice evanescente) impresso, versus latera parce subalbido-squamoso, elytris inflatis, rotundato-ovalibus, prothorace multo latioribus, profunde substriato-punctatis (punctis maximis), interstitus, præsertim alternis, paulo elevatis et minutissime punctulatis (quasi granulosis), ante apicem maculâ magnâ communi hastatâ, necnon in disco singulorum antice plagâ minore obscuriore irregulari, albidioribus, ornatis, funiculi articulo secundo primo sensim longiore — Long corp lin 5-5½

*Habitat* in montibus Teneriffæ, rarissimus

The superb Curculionid described above I believe to be a true *Alophus*, though its gigantic size (compared with the European 3-*guttatus*), in conjunction with its relatively narrower prothorax and broad inflated elytra, as well as the fact of the second joint of its funiculus being perceptibly longer than the first, would give it *prima facie* a rather different appearance. Still, its essential details seem to be those of *Alophus*, whilst the form of its elytral fascia and spots (which are almost precisely those of the 3-*guttatus*) would tend to point out its affinities still more certainly. It is one of the rarest of the Canarian Coleoptera, the only locality in which I have observed it being at the base of the Organo Rocks in the lofty region of the Agua Mansa in Teneriffæ—where, during May 1859, I obtained two specimens (and the mutilated remains of a third one) from beneath stones

Genus 205 **HYPERA**Germar, *Mag der Ent* iv 335 (1821)514 **Hypera lunata**Phytonomus Dauci, *Bulle, in Wclb et Berth* (Col) 72 (1838)*Hypera lunata* Woll, *Ins Mad* 398 (1854)— —, *Id*, *Cat Mad Col* 118 (1857)

*Habitat* insulas Canarienses, sub lapidibus, passim,—in Gomera sola adhuc haud detecta

That this is the insect referred to by M. Brullé under the name of

"*Phytonomus Dauvi*" I am enabled to state for certain, having examined his specimens in the Collection at the Jardin des Plantes. But as he gives neither any *authority* for the specific title nor so much as a single word of description or diagnosis (merely adding "Espèce du midi de l'Europe"), it has of course no claim for consideration. Indeed I can find no notice, in any work to which I have access, of a *Phytonomus* which has ever been published under that name. The *H. lunata*, which is universal in the Madeiran Group (occurring in Madeira proper, Porto Santo, and on the Desertas), there can be no doubt is also universal at the Canaries,—Gomera being the only one out of the seven islands in which, hitherto, I have not met with it. Nevertheless we may feel pretty certain that it exists in Gomera likewise. In Fuerteventura and Palma it was taken also by Mr Gray. It is usually found beneath stones, in the driest and most arid spots, particularly in calcareous ones of a rather low elevation.

#### 515 *Hypera irrorata*, n. sp.

*H.* squamis fuscis, albidis et albido-fuscis densissime irrorata et setulis brevibus subdemissis obsita, rostro gracili, subcylindrico, prothorace parvo, angusto, postice vix angustiore, plus minus distincte trilineato (linea media tenui), elytris latis, subquadrato-oblongis, punctato-striatis, intersticiis (præsertim alternis) plus minus irrorato-tessellatis, in limbo albidioribus, per suturam (ad apicem nigro-terminatam) latius fulvo-tinctis, antennis pedibusque gracilibus, his albido-variegatis, tarsorum articulis primo, secundo et præsertim tertio (vix dilatato-bilobo) sat parvis.—Long. corp. lin.  $3\frac{1}{2}$ —4.

*Habitat* Lanzarotam et Fuerteventuram, in arenosis et calcareis de-gens.

Although in its large size and general (though, at the same time, more variegated) hue this fine *Hypera* is a little suggestive at first sight of the common European *H. punctata*, it does nevertheless, in reality, belong to a totally different Section (of which the *H. isabellina*, from Egypt, may perhaps be regarded as the type), its narrower and more cylindrical rostrum, in conjunction with its much slenderer antennæ and legs (the latter of which have their feet *very considerably* narrower, with the third articulation hardly at all enlarged) and the less developed second joint of its funiculus, will at once serve, apart from other conspicuous characters, to remove it from that insect. In minor details, I may just mention that its rather small and subcylindrical prothorax, combined with its somewhat broad and squarish-oblong elytra, which have their interstices (especially the alternate ones) more or less sprinkled, or tessellated,

with dark and whitish scales (the latter of which preponderate towards the sides and apex, as also on the hinder disc of each), should be particularly noticed

So far as I have observed hitherto, the *H. monata* is confined to Lanzarote and Fuerteventura, and is extremely local even in those islands, occurring principally in sandy and calcareous spots of a low elevation. In the former I took it, from beneath stones, during March and April of 1859, in the flat, arid district immediately to the south of Ariceife, as also on the calcareous slopes adjoining the town of Botancuria in the latter

### 516 *Hypera variabilis*

*Cuculio variabilis*, *Herbst, Kaf* vi 263 (1795)

*Phytonomus variabilis*, *Schön, Gen et Spec Curc* ii 384 (1834)

*Hypera variabilis*, *Woll, Ins Mad* 400 (1854)

— —, *Id, Cat Mad Col* 119 (1857)

*Habitat* insulas omnes Canarienses, vulgaris, forsan introducta

This common European weevil is universal at the Canaries, in the whole seven islands of which I have myself captured it (more or less abundantly). In Lanzarote, Fuerteventura, and Teneriffe it was taken by Mr Gray also, and in the last of those islands by Dr. Crotch and the Barão do Castello de Paiva. It occurs principally about cultivated grounds and corn-fields, and in all probability is a mere importation from more northern latitudes. It is equally abundant in the Madeiran Group, being found in Madeira proper, Porto Santo, and on the Desertas. It is a variable insect, and I believe that the Canarian examples certainly include amongst them the form which I have recorded (perhaps erroneously) in my 'Ins Mad' as the *H. murina*, but which I now suspect cannot be specifically distinct from the remainder, though whether it be really coincident with the true *murina* of Fabricius I will not undertake to pronounce for certain.

### Genus 206 *CONIATUS*

*Germai, Mag der Ent* ii 340 (1817)

### 517 *Coniatus tamarisci*

*Cuculio tamarisci*, *Fab, Mant Ins* 113 (1787)

*Hypera tamarisci*, *Germai Mag der Ent* iv 337 (1821)

*Coniatus tamarisci*, *Schön, Gen et Spec Curc* ii 406 (1834)

*Habitat* Canariam Grandem, in foliis *Tamarisci gallice* haud frequens

The only examples of *Coniatus* from these islands (and which were captured by myself from off Tamarisks, in the Barranco of Mogan

and at El Charco—in the south-west and the extreme south, respectively, of Grand Canary) are, I think, referable to the common *C. tamarisci* of Mediterranean latitudes, though they are certainly of a darker, or more cinereous-coppery, hue than the bright metallic-green types now before me, from Italy and the south of France. In spite, however, of their obscurer colour, I believe that they cannot be identified with the *C. repandus*—which is a darker insect still, with its rostrum nearly black, and with its prothorax almost always conspicuously *trilineated* (the central line particularly being well defined by a blackish portion on either side of it)

(Subfam MOLYTIDES)

Genus 207 **PLINTHUS**

Geimai, *Ins Spec* 327 (1824)

518 **Plinthus musicus.**

*Plinthus musicus*, Woll, *Ann Nat Hist* vi 18 (1860)

*Habitat* in humidis sylvaticis Teneriffæ, hinc inde haud infrequens

This superb *Plinthus*, a full description of which I published in the ‘Ann of Nat Hist’ for July 1860 (where also is added a notice of its stridulating capabilities, and of the anal apparatus by the vibration of which the noise is generated), appears to be peculiar to the intermediate and lofty altitudes of Teneriffe, occurring more particularly in the damp laurel-woods from about 2000 to 3000 feet above the sea. In such situations I have taken it at the Agua Garcia, at Las Mercedes, on the sylvan mountains above Taganana, near Ycod el Alto, at the Agua Mansa, and even (in the “Retama”-district) on the elevated Cumbre above it. The species may be known by its large size and dark-brown surface, which (in fresh and *unrubbed* examples) is more or less ornamented with paler scales at the sides of its prothorax, as well as about the humeral region and apex of its elytra—which last have likewise a small patch on the fore disc of each, and a much broken postmedial fascia.

519 **Plinthus velutinus**

*Plinthus velutinus*, Woll, *Ann Nat Hist* vi 19 (1860)

*Habitat* in montibus excelsis Teneriffæ, usque ad 8000's m ascendens

Like the *P. musicus*, the present species seems to be confined to Teneriffe, though to a higher altitude than that insect. Indeed most (if not all) of the few examples of it which I have yet seen were captured on the two lofty Cumbres—above the Agua Mansa, and adjoining

ing the Cañadas, whereas the *musicus*, although ranging to an equal elevation, descends to about 2000 feet above the sea. In my Paper on these two *Plinthus*, I have stated that the *P. velutinus* "nearly resembles the *musicus*, nevertheless its much darker surface and almost total freedom from additional decumbent setæ, as well as its nearly obsolete elytral patches (which, *when not obliterated*, are reduced to four small punctures, or spots), in conjunction with its slightly shorter and broader rostrum (which is rather more distinctly widened at the base, immediately in front of the eyes), its nearly *unpunctured* prothorax, and the *entire* and less laterally-constricted apex of its more feebly sculptured elytra, will readily separate it from that species." And I may further add that its prothorax is a trifle more rounded and produced, or less straightly truncated, at the apex (though not so much so as is the case in the *P. cucullus*), and that its elytral interstices (when denuded of their scales) will be seen to be rather more shining—being a little less roughened, and consequently less opaque.

#### 520. *Plinthus cucullus*, n. sp.

*P. inter musicum et velutinum aliquo modo situs, sed minor, rostro ad apicem vix magis subito dilatato, prothorace (in disco minus evidenter bumpresso) densius punctato necnon antice in medio magis rotundato-producto (nec truncato), elytris ad humeros paulo minus porrectis (i. e. vix magis oblique truncatis)*

Cum *musico* colore generali elytrorumque interstitus subopacis rugulosis necnon femoribus anticis fortiter spinosis congruit, sed rostro breviusculo crassiusculo elytrisque ad apicem obtusis integris *velutinum* potius simulat—Long corp. lin.  $5\frac{1}{4}$

*Habitat* in montibus humidis Canariæ Grandis, die 21 Apr. A. D. 1858 exemplar unicum cepi

Having but a single example of this *Plinthus* to judge from, I should have been disinclined to believe that the few peculiarities which it presents were indicative of an additional species did not its *habitat* (in the laurel-districts of Grand Canary) render such *a priori* probable. Although with many characters in common with them both, it certainly does not accord with either of those just enumerated, being in many respects indeed intermediate between the two. If the individual now before me be a normal one, the *P. cucullus* seems to differ from both of its Teneriffan allies in being a little smaller, with its rostrum perhaps somewhat more *suddenly* dilated at its apex, with its prothorax (which is less evidently impressed on its disc, on either side of the keel) more thickly besprinkled with large punctures, and more produced (or rounded) in the centre at its apex, and in its

elytra being a trifle less plicate, or more drawn in, at the shoulders. In its general colouring, as well as in the interstices of its elytra being (when the scales are removed) opaque and rugulose, and in its more acutely spined femora, it agrees best with the *P. muscus*, but in its somewhat shorter and thicker rostrum, as well as in its elytra being obtuse and entire at their extremity (instead of separately pointed), it accords better with the *velutinus*.

The unique specimen I captured between Guia and Osorio, on the mountains of Grand Canary—in the laurel-region (fast decreasing) which represents the ancient forest of El Dorames

#### Genus 208 **XENOMICRUS** (nov. gen.)

Genus affinitate cum *Liosomate* Steph., conjunctum atque illud primâ facie simulans, sed corpore parce pubescente (nec glabro), antennis ad (nec pone) apicem (sensim dilatatum) rostri brevioris crassioris et minus arcuati insertis, oculis majoribus, prothorace cylindrico, scutello conspicue observando pedibusque longioribus gracilioribus cetero distinctum videtur.

A ξένος, mirabilis, et μικρός, parvus

The little Curculionid from which the above structural diagnosis has been drawn out is closely related to *Liosomus*, with which indeed, until critically examining it, I had supposed it to be congeneric, nevertheless when accurately inspected it will be seen to differ in most of its details from the members of that group. Thus, it is *pubescent* (even though minutely and sparingly so), instead of being glabrous, its rostrum is shorter, thicker, and less arcuated, and is much more expanded at the apex—where the antennæ are inserted (instead of at some distance behind it), its eyes (although equally sunken) are larger, its prothorax is cylindrical, its scutellum is conspicuous and rounded, its elytra are inflated and elliptic (being acute, and constricted, at their apex), and its legs are rather longer and slenderer.

#### 521 **Xenomicros apionides**, n. sp.

X. piceo-niger elytris subænescentibus, pube brevi demissâ cinereâ parçissime vestitus, capite prothoraceque (leviter punctato) subopacis, subtilissime alutaceis, rostro longitudinaliter rugoso, elytris ellipticis (antice angustatis, postice acute subconstrictis), convexis, ad basin singulatim oblique subrotundatis, nitidis, sat profunde punctato-striatis, interstitiis uniseriatim punctatis, antennis rufo-ferrugineis, ad apicem piceis, pedibus piceis, tarsis (et interdum tibus) clarioribus, femoribus simplicibus.

*Parat* (immaturus) capite prothoraceque rufo-ferrugineis.—Long corp. lin 1-1½

*Habitat* in sylvaticis intermedus Tenebriffæ et Palmæ, rarissimus

Apparently extremely rare, and confined (so far as I have observed hitherto) to the moist sylvan regions in Teneriffe and Palma, of a rather lofty elevation. Thus, during May of 1858, I captured it in the latter—from amongst damp herbage in the Barranco da Agua, and, exactly a year afterwards, in the former—on the densely wooded mountains above Taganana. Its elytra are more or less obscurely brassy (occasionally with even a greenish tinge), and, when immature, its head and prothorax are sometimes rufescent.

(Subfam. BYRSOPSIDES)

Genus 209 **GRONOPS**

Schönherr, *Curc. Disp. Meth.* 157 (1826)

Although placed so widely apart from each other in Schönherr's most artificial classification, that they are treated as members of different *Subfamilies*, I am nevertheless persuaded that the present genus and *Rhytidorhinus* are intimately related. Indeed it appears to me that they are but just separable, for after the most careful comparison of the various details of their structure, the only real differential features which I can detect are, that, whilst *Gronops* is winged and has only the basal joint of its funiculus enlarged, *Rhytidorhinus*, on the contrary, is apterous and has its first and second funiculus-joints elongated. Nearly all the other details of the genera, although made to sound different in the respective diagnoses, are, when actually examined, found to be identical,—those characters of *Rhytidorhinus* which are based upon the larger size and more uneven surfaces of the several representatives being merely in degree, and not in kind. My own belief is that they should be regarded as Sections of a single group, nevertheless, since the smallness, in *Gronops*, of the second articulation of the funiculus, which is quite as short and transverse as the third, and its developed wings are real and structural differences (whatever value may be attached to them), it will perhaps be desirable to consider the genus, however nearly allied to *Rhytidorhinus*, as at any rate distinct from it, and, *thus far at least*, to endorse the ordinary ideas on the subject\*.

522 **Gronops lunatus**

*Curculio lunatus*, *Fab., Syst. Ent.* 148 (1775)

*Rhynchænus costatus*, *Gyll., Ins. Suec.* iii 89 (1813)

*Gronops lunatus*, *Schön., Gen. et Spec. Curc.* ii 253 (1834)

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\* Since the above remarks were written, I am happy to perceive that they have been fully borne out by Lacordaire, who places the two genera referred to in juxtaposition.

*Habitat* in Lanzarota et Fuerteventura, sub lapidibus in arenosis vulgaris etiam in Teneriffa (in ipsâ urbe Sanctæ Crucis) specimen unum deprehendi

I cannot detect any real difference between the Canarian specimens which I refer to the above insect and the ordinary British ones,—though, since the species is so exceedingly variable both in the colour of its scales and in the greater or less development of its fasciæ, certain extreme individuals *if taken alone* might almost have been regarded as distinct. Nevertheless out of 58 examples now before me (hardly two of which are precisely alike) I seem to have all the varieties which are indicated amongst my English specimens, and I have therefore no hesitation in identifying the whole of them with the European *G. lunatus*. It is an insect which has exactly the same habits as the *Rhytidorhinus brevitarsis*, with which indeed it is usually found in company. I have captured it in similar spots both in Lanzarote and Fuerteventura, namely beneath scoræ—within the holes and inequalities of which it is apt to secrete itself, and out of which it is often difficult to extract it. It would appear to exist in Teneriffe also, for I once met with a single example of it in S<sup>ta</sup> Cruz.

#### Genus 210 RHYTIDORHINUS

Schönheir, *Curc. Disp. Meth.* 162 [script *Rhytidorhinus*] (1826)

##### 523 *Rhytidorhinus brevitarsis*, n. sp.

*R.* subovato-oblongus, squamis fuscis et albido-fuscis densissime nebulosus, rostrum profunde canaliculato, ad basin bituberculato, prothorace valde inæquali, in dorso late canaliculato, utrinque profunde longitudinaliter impresso, apice in medio elevato, antice rotundato-amphato, postice angustiore, elytris obsolete nigro-irroratis, profunde punctato-striatis (punctis magnis), suturâ interstitisque alternis costato-elevatis, præsertim ante apicem (desinentem) nodos efficientibus, antennis pedibusque brevibus, illis rufo-piceis, his squamosis, femoribus plus minus nigro-annulatis, tarsis brevibus. *Variat* elytris in medio obsolete transverse subpallido-fasciatis.—Long. corp. lin.  $2\frac{1}{2}$ —3

*Habitat* Lanzarotam et Fuerteventuram, in eisdem locis ac *Gonops lunatus* degens. sub scoris in arenosis aridis hinc inde abundat.

The present *Rhytidorhinus* is very closely allied to two species now before me, which were taken by the Rev. Hamlet Clark in the south of Spain, particularly however to one of them (which may perhaps be the *crispatus*, Schön.). Nevertheless from both it may immediately be recognized by its shorter antennæ and legs, the tarsi especially having the basal and apical joints *much* more abbreviated—a struc-

tural character of considerable importance. In minor particulars, the Canarian insect has its elytra perhaps a trifle more expanded behind the middle than is the case in the Spanish species which it most nearly resembles, and their nodules, formed by the interrupted alternate ridges, at that particular point, are, if anything, somewhat more developed, whilst their apex itself is a little more drawn in, or suddenly shortened.

The *R. brevitarsis* seems to be confined to Lanzarote and Fuerteventura, where it is far from uncommon—occurring beneath stones and scoræ in arid places, particularly sandy ones of a low elevation. Under such circumstances it was taken sparingly by Mr. Gray and myself in Lanzarote, during January 1858, in which island, however, I captured it much more plentifully during March of the following year—in submarine spots between Arrecife and Yaiza, as well as at Papagayo in the extreme south—and I likewise met with it a few weeks later, in equal abundance, at the edges of the coast-road, to the north of Puerto de Cabras, in Fuerteventura, and, more sparingly, in the little island of Lobos in the Bocayna Strait. It is very gregarious, often congregating in clusters beneath a single stone.

(Subfam. BRACHYCERIDES)

Genus 211. **BRACHYCERUS**

Fabricius, *Syst. Eleu.* ii. 412 (1801)

524. *Brachycerus opacus*, n. sp.

*B. niger, opacus, valde inæqualis, capite prothoraceque parcius punctatus variolisque maximis notatis, illo supra oculos singulos altissime lobato (lobo alterum, minorem sed sat magnum, retroisum pro ductum, ad basin rostri situm, attingente), hinc ad latera in medio acute angulato necnon per discum plicis duabus maximis altis longitudinaliter instructo, postice inter plicas obsolete carinato, antice utrinque late impresso, elytris subquadratis, grosse transversim plicato-nodosis, in disco singulorum necnon in limbo plicâ altiore grosse dentata serrato-rugatis.*—Long corp. lin. 7

*Habitat* in montibus Lanzarotæ borealis, semel tantum captus.

The unique specimen from which the above diagnosis has been compiled, and which was captured, during March 1859, on the hills above Haria, in the north of Lanzarote, differs from every *Brachycerus* with which I am acquainted in its entirely opaque body (even when denuded of the mud-like scales with which it is a good deal clothed), by its excessively *uneven* surface (the elytra being densely beset with very elevated transversely-subconfluent nodules, or undulated *placæ*,

and with a zigzag line of still larger prominences down the disc, as well as along the outer margins of each), by its immense occipital humps (which constitute a ridge above either eye) *almost touching* anteriorly the smaller, *though sufficiently large*, backwardly-produced one on each side of the base of the rostrum, and by the two longitudinal folds of its (laterally angulated) prothorax being considerably raised, and comparatively well defined. Its elytra, although thus fringed with enormous notches, or remote, unequally shaped teeth are nearly *square* in outline

(Subfam OTIORHYNCHIDES)

Genus 212 ATLANTIS

Wollaston, *Ins Mad* 361 (1854)

Whether the five insects described below be strictly referable to the same genus as the ordinary Madeiran *Atlantides* I will not undertake, in my present doubt as to the actual value of certain structural characters in this immediate department of the *Curculionidae*, to pronounce for certain. But that they cannot be assigned to *Lapaeocerus proper* (of which the *L. morio* was Schonheir's acknowledged type) I am satisfied—seeing that their *much thicker* antennæ (the scape of which is rather less *abruptly* clavated at its tip) and the different proportions of their more obconical funiculus-joints (of which the second is conspicuously longer than the first) will of themselves, I think, more than suffice to prevent such an amalgamation. It is, however, no less true that in several particulars they do not tally with the normal members of *Atlantis*, nevertheless the features in which they agree with the latter, I am inclined to believe, are *more* important than those which would tend to affiliate them with *Lapaeocerus* (and, *à fortiori*, with *Eremnus*, of southern Africa), so that I prefer, for the present, treating them as *Atlantides* to the risk of erecting a new genus (or—which would rather be necessary—two new genera) for their reception in this extensive and obscure division of the *Rhynchophora*

§ I *Corpus parvum, scrobe valde profundâ, brevi, auriculiformi, sursum (supra marginem oculi superiorem) ascendente, oculis minutis, oblique subconicis, postice alte prominentibus. Facies sexualis valde dissimilis, sed pedibus in utroque sexu fere similibus* (Subg *Anphora*, Woll.)

525 *Atlantis canariensis*

*A. piceo-vel fusco-nigra subnitida, subcinereo- (vix submetallico-) squamoso-tessellata setisque suberectis in elytris obsita, rostro*

crasso, subtriangulari, sat rugose subpunctato, canaliculâ valde profundâ (inter oculos parvos, oblique subconicos, postice alte prominentes, latiore, foveæformi) impresso, prothorace dense et profunde punctato, carinato, elytris profunde crenato-striatis, sulcâ postice interstitiisque alternis plus minus obscure subconico-tes-sellatis, antennis pedibusque robustis, fusco-ferrugineis

*Mas* paulo minor, angustior, rostro vix graciliore, prothorace crebrius et rugosius punctato, minus carinato (carinâ tamen rarius omnino obsoletâ), elytris anguste et regulariter ovalibus, paulo levius crenato-striatis, setulis superadditis brevibus

*Fœm* paulo major, latior, rostris vix crassiore, prothorace minus crebre et magis æqualiter punctato, in disco valde carinato (carinâ interdum altissime elevatâ), elytris subobtriangularibus (basin versus latiusculis), vix profundius crenato-striatis, setis superadditis longioribus—Long corp lin  $2\frac{1}{3}$ —3

*Laparocerus canariensis* (Chev), *Schon*, *Gen et Sp Cui c* vii 228 (1843)

*Habitat* supra regionem sylvaticam in montibus valde excelsis Teneriffæ, usque ad 9000' s m ascendens sub lapidibus scorisque inter arbusculas *Spartu nubigenæ* congregat

As indicated in my *Sectional* diagnosis, this insect is so peculiar in many respects that I believe it will eventually be found desirable to erect a separate genus for its reception nevertheless, as this may possibly be necessary for the four succeeding species likewise, and I am anxious not to establish additional groups amongst these obscure Rhynchophorous forms, I have thought it better to refer them all to *Atlantis* (since "*Laparoceri*" they clearly are not), and I have consequently given merely a subgeneric name to each of the Divisions, in the anticipation of further data rendering their isolation absolutely unavoidable Thus, the *A canariensis* is more especially remarkable for its deep, short, and upwardly-directed scrobs, for its excessively prominent, minute, and *obliquely-conical* eyes (which are consequently greatly elevated *behind*, instead of at their middle point), and for the curious dissimilarity of its sexes—the females being not only larger and wider than the males (which is of very common occurrence amongst the *Cuculionidæ*), but also with their prothorax less closely and more regularly punctured, and with the central keel (which is always much smaller, and sometimes nearly obsolete, in the opposite sex) more or less greatly elevated, whilst the suberect setæ with which the elytra are beset are considerably longer

Through the kindness of M Cheviolat I have been enabled to examine the type of Schöenherr's *Laparocerus canariensis*, which was furnished originally by his collection, and there can be no doubt that

it is identical with our present species. It is, however, a rather small, *rubbed*, and not quite mature (male) example, in which the prothoracic keel is but slightly developed. These facts may account in some measure for the excessive badness of Boheman's description, though they cannot justify absolute misstatements, in which the diagnosis and description are made to contradict each other.

The *A. canariensis* appears to be confined to very lofty altitudes in Teneriffe, never descending (so far as I have observed hitherto) even into the wooded districts, but occupying the elevated regions which are specially characterized by the presence of the *Spartum nubigena*, or "Retama"—the superb Broom peculiar to those upland tracts. In such situations I took it abundantly, during May 1859, from beneath stones and scoriæ, on the Cumbre adjoining the Cañadas, above Ycod el Alto (from about 8000 to 9000 feet above the sea), as well as on the *opposite* Cumbre, above the Agua Mansa. In the former of those localities it has been also found, more recently, by Dr. Crotch.

§ II *Corpus sat magnum, sube postice latâ divaricatâ, oculis modice prominentibus. Facies sexualis huic valde dissimilis, sed pedibus secundum sexum plus minus diversis.* (Subg. *Canopus*, Woll.)

#### 526 *Atlantis subnebulosa*, n. sp.

*A. fusco-nigra*, subopaca, parce et minute submetallico-squamoso-tessellata, rostro parallelo, minute et leviter subpunctato, late concavo, canaliculâ (antice tenui sed postice inter oculos parvos prominentes profundâ foveæformi) impresso, prothorace angustulo, profunde et dense ruguloso-punctato, carina antice evanescente instructo, scutello parvo, elytris profunde punctato-striatis, interstitiis exterioribus postice subelevatis, antennis pedibusque vix dilutioribus.

*Mas* adhuc latet.

*Pæm.* tibis posticis simplicibus.—Long. corp. lin. 5.

*Habitat* Canariam Grandem, tempore vernali a d. 1858 semel tantum lecta.

Judging from the unique example (a female one) of this insect now before me, I think it will be impossible to regard it as an insular modification of the *A. tibialis*, though in size and general proportions it has certainly much in common with it. Nevertheless its rather browner and more opaque surface, *which is sparingly tessellated all over* (though particularly on the elytra) *with minute palish-metallic scales*, in conjunction with its more rugose prothorax (on which there is a distinct central keel, which vanishes in front), its rather less diminutive scutellum, the somewhat smaller punctures of its striæ, and

the fact of its outer elytral interstices being perceptibly (though but a little) raised behind, will all tend to remove it from that species. The single individual described from was captured by myself, during the spring of 1858, in Grand Canary, but whether in the district of El Monte or in the Isleta I cannot now exactly recall.

#### 527 *Atlantis tibialis*, n. sp.

*A. nigra*, subnitida, (oculo fortissime armato) subtilissime et brevissime pubescens, rostro minute et leviter striguloso-subpunctato, late concavo, canaliculâ (antice tenui sed postice inter oculos parvos prominentes profundâ foveæformi) impresso, prothorace profunde et dense punctato, scutello minutissimo, elytris basi conjunctim subemarginatis, ad humeros oblique rotundatis, profunde punctato-striatis (punctis magnis), antennis tarsisque piceo-ferrugineis, femoribus tibisque nigro-piceis.

*Mas* vix angustior, tibus posticis intus ante apicem subito sed leviter rotundato-ampliatis.

*Fœm* vix latior, tibus posticis simplicibus.—Long corp. lin. 4-5.

*Habitat* Teneriffam et Palmam, in inferioribus sub lapidibus, passim.

This large and black species, so well distinguished by its dull and only slightly shining surface, deeply punctured prothorax, excessively minute scutellum, the enormous punctures of its elytral striæ, and by the two hinder tibiæ of its male sex being increased, a little before their inner apex, by a slight flattened amplification, or as it were by a small portion suddenly rounded outwards, is apparently not uncommon at low elevations in Tenerife and Palma. In the former of those islands I have taken it frequently, from beneath stones, in the dry cindery region around the Puerto of Orotava—a locality in which it was likewise found by Mr. Gray, whilst in the latter I met with it, in similar situations, in the Barranco immediately above Sta Cruz.

#### 528 *Atlantis tetrica*

*A. speciei præcedenti similis*, sed vix minor, angustior, nitidior, magis atra et paulo magis glabra, prothorace sensim convexiore, in disco minus profunde et minus dense punctato (punctis minoribus subobsoletis), scutello in utroque sexu majore (sed parvo), elytris ad basin paulo rectius truncatis, striarum punctis vix minoribus.

*Mas* vix angustior, tibus posticis intus ante apicem latiusculum leviter excavatis.

*Fœm* vix latior, tibus posticis fere simplicibus.—Long corp. lin. 4-4½.

*Eremnus tetricus*, *Schon*, *Gen. et Spec. Curc.* ii. 542 (1834).

*Otiorhynchus simplex*, *Brullé*, in *Webb et Berth (Col.)* 71 (1838).

*Laparocerus tetricus*, *Schon*, *Gen. et Spec. Curc.* vii. 228 (1843).

*Habitat* Teneriffam, in inferioribus prope Sanctam Crucem sub lapidibus necnon in plantarum bifurcationibus haud infrequens

From types which have been communicated to me by M. Chevrolat, I am enabled to state for certain that Schonherr's *Lapanocerus tetricus* is the Curculionid which I would desire now to characterize—and not the preceding one indeed the published diagnosis of it, though far from accurate, is sufficiently clear on several points (particularly the punctuation of the prothorax) to prevent its being confounded with that insect. Nevertheless it is unquestionably very nearly allied to it—so much so, in fact, that until I had overhauled the two critically I had regarded them as the sexes of a single species. But finding, on closer examination, that I possess males and females of both of them, and which present features which I had at first overlooked, I now perceive that such cannot be the case. It may be known easily from the *A. tibialis* by being, on the average, a trifle smaller and narrower, as well as rather more shining and of a deeper black, by its prothorax being a little convexer and more lightly, finely, and distantly punctured *on the disc*, by its scutellum (although minute) being perceptibly larger than is the case in that insect, by its elytra being a trifle less conjointly-emarginated (or more *straightly* truncated) at their base, and with the punctures of their stræ perhaps less immense, and by the two hinder tibiæ of its male sex being rather scooped-out internally at a short distance from their apex, causing them to appear curved inwards (and rather enlarged) at the tip.

I have observed the *A. tetrica* only in Teneriffe, and hitherto merely at low elevations near S<sup>ta</sup> Cruz where it would seem to occupy much the same sort of position as the *tibialis* does around Orotava. It was also found in the vicinity of S<sup>ta</sup> Cruz by the late Rev W J Armitage, and it has recently been sent therefrom by the Barão do Castello de Paiva, who captured it “in *Cacaliæ* bifurcationibus” in the Barranco Santo.

The *Otiorhynchus simplex* of M. Brullé appeared to me, from the type which I examined in Paris, to be founded on nothing more than an immature example of this species, and indeed his description (such as it is) would, I think, imply that it cannot be referable to the *A. tibialis*, since he expressly states of the prothorax, ‘sa surface inférieure et latérale est fortement ponctuée, sa surface dorsale est au contraire presque dépourvue de points’.

### 529 *Atlantis angustula*.

*A. angustulo-subcylindrica*, atra, subnitida, subtiliter pubescens pi-

hisque elongatis erectis in elytris obsita, rostro crassiusculo, punctato, supra haud concavo, oculis rotundatis, prominentibus, prothorace convexo, per basin ipsissimam subsinuato et distincte marginato, sat profunde subruguloso-punctato punctulisque minutis intermediis valde distinctis parum crebrie irrorato, elytris subcylindricis, profunde punctato-striatis, antennis tarsisque piceis, femoribus tibusque nigris

*In utroque sexu fere similis* — Long corp lin 3-4½

*Atlantis angustula*, *Woll, Ann Nat Hist* vi 219 (1863)

*Habitat* Canariam Grandem, sub lapidibus in inferioribus et intermediis late diffusa

This well-defined species appears to be peculiar to Grand Canary, where it is probably universal at low and intermediate elevations. During the spring of 1858 I took it throughout the region of El Monte, particularly on the Bandama mountain, as also, in tolerable abundance, at Arguineguin, in the south-west of the island, and it was captured by the Rev R T Lowe in the Isleta (to the north of Las Palmas). It may be known immediately by its rather narrow and subcylindric outline, intensely black hue, and minutely pubescent surface (which is studded on the elytra with long, erect additional hairs), by its rather thick rostrum (which is *not* concave above, as is the case with the three preceding species), by its prominent eyes, by its roughly punctured and somewhat convex prothorax (which is strongly margined along its posterior edge), and by its sexes being almost identical in their external features.

### Genus 213 LAPAROCERUS

Schönherr, *Gen et Spec Curc* ii 530 (1834)

As may be gathered from a glance at the following pages, *Laparocerus* plays a most significant part amongst the Canarian *Cuculionidae* — no less than thirty well-defined species having already been detected throughout the archipelago. It is intimately allied to the genus *Atlantis*, which is so strongly expressed at the Madeiras, but which seems to have but few representatives (and those somewhat aberrant ones) in these islands. It would appear indeed that, whilst both genera are found in the two Groups, *Laparocerus* is as essentially Canarian as *Atlantis* is Madeiran — since but three exponents of the former have hitherto been observed in Madeira, whilst of the latter only five *abnormal* ones have yet been brought to light at the Canaries. Apart from minor distinctions, the *Laparoceri* may be known immediately from the *Atlantides* by the construction of their scape — which is excessively slender but *suddenly* clubbed at its extreme

apex, whilst in *Atlantis* that portion of the antennæ is robust and thick throughout, it being *gradually* incrassated from its base

### 530 *Laparocerus morio*

*Laparocerus morio*, *Schon*, *Gen et Spec Curc* ii 531 (1834)

— —, *Woll*, *Ins Mad* 360 tab vii f 1 (1854)

— —, *Id*, *Cat Mad Col* 113 (1857)

*Habitat* in Teneriffa et Gomera, mihi haud obviuus, a Barone "Castello de Paiva" benigne communicatus

The *L morio*, which absolutely swarms throughout every portion of the Madeiran Group, has not yet come beneath my own observation in these islands. Nevertheless three specimens of it have been communicated by the Barão do Castello de Paiva which I can have no doubt are (as they profess to be) truly Canarian, so that I have not any hesitation in admitting the species into this Catalogue. Two of these, he informs me, were captured by himself on a dry cindery hill near Orotava in Teneriffe, whilst the other was sent to him by a Spanish correspondent from Gomera.

The *L morio* may be known from all the other *Laparoceri* here enumerated by its dark hue and dull, most minutely pubescent (but often obscurely subtessellated) surface, by its convex, subglobose prothorax (which is regularly punctured and densely beset with extremely diminutive punctules between the larger ones), and by the structure of its tibiæ—the anterior four of which are more evidently armed with a minute horizontal spine at their inner apex, whilst the hinder pair of the males have their internal angle largely scooped out, or emarginated, so as to form an obtuse and slightly prominent heel at a considerable distance behind the extremity.

### 531 *Laparocerus sculptus*.

*L brunneo-niger* (immaturus rufo-brunneus), subopacus, minute et densissime sculpturatus necnon pube minutissima brevissima demissâ ubique confertim obsitus, prothorace angustulo, minute et densissime punctulato, elytris convexis, basi subrecte truncatis, callo humerali incrassato, crenato-striatis, interstitiis minutissime et densissime transversim substringuloso-rugatis, antennis pedibusque rufo-ferrugineis — Long corp lin 5½

Otiorynchus sculptus, *Brullé*, in *Webb et Berth* (Col) 71 (1838)

*Habitat* Palmam, in lauretis editioribus humidis, rarissimus

The nearly opaque and very minutely pubescent surface of this large *Laparocerus*, in conjunction with its exceedingly dense but extremely fine sculpture (the head and prothorax being most closely and deli-

cately punctulated, whilst the elytra are roughened by diminutive, transversely-confluent punctules which form as it were irregular *strigæ*), will sufficiently characterize it. Its prothorax, like that of the *L. undatus*, is rather narrow and slightly conical, and its entire colour when immature is of a more or less reddish brown—except the limbs, which are pale rufo-ferruginous. Hitherto I have met with it only in the laurel-districts of the island of Palma, where it would seem to be extremely rare in damp spots of intermediate and rather lofty elevations. I captured the four specimens (female ones) from which the diagnosis has been compiled towards the upper extremity of the Barranco de Galga, and on the ascent of the Cumbre above Buenavista\*.

### 532 *Laparocerus undatus*, n. sp.

*L.* subellipticus, niger, obsoletissime subænescens, subnitidus, rostro longiusculo, prothorace angustulo, inæqualiter subpunctulato-ruguloso et punctis majoribus levibus parce adperso, elytris basi subrecte truncatis, postice subproducto-acutiusculis, callo humerali incrassato, punctato-striatis, interstitiis undulato-inæqualibus, subrugulosis, punctis perpaucis magnis sed valde levibus notatis et pilis brevibus suberectis cinereis valde remotis obsitis, antennis tarsisque ferrugineis, femoribus tibisque nigro-piceis.—Long corp. lin.  $5\frac{1}{2}$ – $5\frac{3}{4}$ .

*Habitat* in humidis sylvaticis Teneriffæ, supra Tagananam captus.

This is perhaps, on the average, the largest of the Canarian *Laparoceri* as yet detected, and it may at once be known by its somewhat elliptic outline (it being rather acute both before and behind), by its only slightly shining, dull-black surface, which has a just perceptible ænescent tinge, and by its elytral interstices being waved (or undulated), less evidently transversely-strigulose than in the *L. sculptus*, but with a few very large though extremely shallow punctures, as well as a few exceedingly distant, suberect hairs, down each. Like the *L. sculptus* it is of the greatest rarity, being attached to similar spots as that insect, though in Tenerife instead of Palma. Indeed the only region in which I have observed it hitherto is, at a high elevation, on the damp laurel-clad mountains above Taganana—where during May of 1859 I met with the four specimens (all females) from which my diagnosis has been drawn out.

\* Although M. Brullé's 'description' does not indicate a single character by which his *Otiorynchus sculptus* could by any possibility be identified, I am nevertheless enabled to state for certain that the present *Laparocerus* is the species to which he referred, having myself examined his type, which still exists at Paris, in the collection at the Jardin des Plantes.

533 *Laparocerus excavatus*

*L. niger*, nitidus, fere calvus, prothorace convexo, minutissime, dense et levissime punctulato punctisque majoribus sed vix profundis parce (in disco antico sæpius parcissime) notato, fere simplici (i. e. in medio vix lineato), elytris basi subbisinuato-truncatis, callo humerali valde incrassato, profunde punctato-striatis, interstitiis minutissime transverse substriguloso-rugatis et punctis (versus suturam parvis) remote obsitis, antennis rufo-ferrugineis, pedibus rufo-piceis

*Mas* sæpius subnitidior, tibus anticis intus versus apicem profunde excavatis, posticis fortiter sed parce seriatis

*Fœm* sæpius subopacior, tibus fere simplicibus

*Var*  $\beta$  *lugubris* [an species?] Paulo major, opacior et fere omnino (etiam oculo fortissime armato) calvus, prothorace densius punctato, elytrorum interstitiis magis æqualibus punctulisque minoribus adspersis —Long corp.  $\ln$  4-5½

*Laparocerus excavatus*, Woll, *Ann. Nat. Hist.* xi 219 (1863)

*Habitat* in montibus sylvaticis Teneriffæ, præsertim inter muscos et lichenes ad truncos arborum crescentes, necnon sub ligno marcido latens

The present insect, which has been observed hitherto only in Teneriffe, is essentially a sylvan one,—the few examples which I have met with in more barren spots being, as I should imagine, the result of an accidental transportation, either through the instrumentality of floods or other contingencies. Thus, for instance, it is rather common on the damp laurel-clad mountains at Las Mercedes (beneath stones, pieces of wood, and under moss and lichen growing upon the trunks of trees), and on one occasion I captured a stray specimen, at an altitude only slightly higher than that of S<sup>ta</sup> Cruz, even towards the entrance of the Barranco do Passo Alto—which, however, takes its rise in the Las Mercedes range. But in the forest districts of intermediate and rather lofty elevations it appears to be pretty widely spread over the island. On the sylvan slopes above Taganana and Point Anaga, as well as at the Agua Garcia, it is by no means scarce.

The *L. excavatus* may be recognized by its dark, shining, and (except under a high magnifying power) almost glabrous surface—there being only a few longer hairs at the apex of its elytra, by its convex prothorax, which is a good deal rounded at the sides, most minutely, finely, and densely punctulated, and with larger and deeper punctures (which are usually more or less obsolete on the anterior disc) sparingly intermixed, by the front tibiæ of its male sex being deeply scooped out internally, whilst the hinder pair are powerfully crenulated, and by its elytra being somewhat bisinuated along their basal edge, with

their humeral callus a good deal developed, and with their interstices rather coarsely transversely-substrigulose and studded with remote, shallow punctures—which are tolerably large towards either side, but smaller and less impressed towards the suture

The few specimens which I have treated, in my diagnosis, as a “var  $\beta$ ” of the present species, and which I hardly imagine can be truly distinct, are a little larger and less shining than the ordinary type, with their prothorax more closely sculptured, with their elytral interstices more *even* (caused partially by the few scattered punctures being smaller), and with their entire surface even balder still,—the minute hairs with which the species is sparingly beset being so diminutive as to be scarcely traceable even beneath the microscope. One of them was taken by Dr Crotch on the subsylvan mountains above Ycod el Alto, and the remainder by myself at the Agua Garcia

#### 534 *Laparocerus grossepunctatus*, n. sp.

*L. subellipticus*, niger (vix obsoletissime subænescens), parum nitidus, parce metallico-squamosus, rostro subgracili, grosse punctato, profunde canaliculato, prothorace parvo, profunde punctato punctulisque minutis intermediis sat dense irrorato, in medio simplici (i. e. haud lineato), elytris apice acutiusculis, callo humerali fere obsoleto, profunde punctato-striatis, interstitiis inæqualibus, punctis perpaucis maximis profundis notatis et pilis suberectis valde remotis præsertim postice obsitis, antennis rufo-ferrugineis, pedibus piceis

*Max.* tibus anticis intus versus apicem leviter sinuato-excavatis, posticis intus rectis et minutissime subcrenulatis

*Fem.* tibus fere simplicibus —Long corp. lin 4

*Habitat* in laucetis humidis Teneriffæ, rarissimus

The only two examples of this *Laparocerus* which I have yet seen were captured by myself in Teneriffe, on the damp laurel-clad mountains above Taganana, during May of 1859. The species may easily be known by its rather narrow and deeply channeled rostrum, by its somewhat small and coarsely punctured prothorax, by its surface being more or less sparingly tessellated with metallic scales, and by the immense punctures of its elytral interstices. It is the last of these characters, in conjunction with its somewhat narrower rostrum and its *totally* unkeeled and rather less basally-margined prothorax, which appears to distinguish it *principally* from the *L. squamosus*

#### 535 *Laparocerus squamosus*.

*L. niger* vel piceo-niger, parum nitidus, parce metallico-squamosus, rostro crassiusculo, grosse longitudinaliter striguloso-punctato, pro-

funde canaliculato, prothorace angustulo, profunde punctato punctulisque minutis intermediis irrorato, in medio obsolete carinato, per basin anguste sensim marginato, elytris callo humerali fere obsolete, profunde punctato-striatis, interstitiis punctis valde perpaucis levibus notatis et pilis brevibus suberectis remotis præsertim postice obsitis, antennis rufo-ferrugineis, pedibus rufo-piceis

*Mas* tibis anticis intus versus apicem vix sinuato-excavatis, posticis intus rectis et minutissime suberenulatis

*Fcem* tibis fere simplicibus — Long corp ln  $3\frac{1}{2}$ —4

*Otiorhynchus squamosus*, Brulle in Webb et Berth (Col) 71 (1838)

*Habitat* in sylvaticis intermediis Teneriffæ, rarissimus

The rather small, deeply and somewhat densely punctured prothorax of this species, which is obsoletely keeled down the middle and narrowly (but conspicuously) margined along its basal edge, combined with its roughly longitudinally-sculptured, rather deeply channeled rostrum, and its coarsely punctate-striated elytra, which (even in unrubbed examples) seem to be but sparingly squamose and studded (particularly on their posterior half) with a few short, very distant, and suberect hairs, will serve to distinguish it from its allies. Its interstices are most remotely besprinkled with a very few shallow punctures, which are nearly evanescent towards the suture, and its posterior male tibiæ are rather sharp and straightened along their inner edge, where they are very minutely and obscurely crenulated. I have little hesitation in identifying it with M Brullé's *Otiorhynchus squamosus*, since the type of that insect, which I examined in Paris, although a very unsatisfactory one, appeared to agree sufficiently well with the few examples (captured by myself in the intermediate elevations of Teneriffe, namely at the Agua Garcia, the Agua Mansa, and Ycod el Alto) from which the above diagnosis has been drawn out. M Brullé's *description* applies equally to the whole of these immediate species, containing no allusion to any single feature which could possibly be regarded as diagnostic

### 536 *Laparocerus crassirostris*, n sp

*L* angustulo-elongatus, subdepressus, fusco-piceus, subnitidus, parve metallico-squamoso-tessellatus sed pilis superadditis fere carens, capite crasso, minutissime et dense punctulato, rostro brevi crasso subquadrato vix canaliculato sed postice inter oculos foveâ magnâ profundâ impresso, prothorace brevi, apice subsinuato-truncato, minute et dense punctulato punctisque majoribus (sed haud magnis) sat crebre obsito, elytris elongato-suboblongis, punctato-striatis, antennis rufo-ferrugineis, pedibus rufo-piceis

*Mas* (nisi fallor) tibis (etiam posticis) intus simplicibus

*Fcem* adhuc latet — Long corp ln  $3\frac{2}{3}$

*Habitat* in montibus Canariæ Grandis, mense April A D 1858 exemplar unicum in pineto quodam excelso regionis "Tarajana" dictæ deprehendi

In its narrow, elongate outline, its short, thick rostrum, and its apically truncated prothorax, the specimen from which the above diagnosis has been compiled somewhat resembles at first sight a *Brachyderes*, nevertheless its longer antennæ and differently formed *scrobs*, in conjunction with the deeply excavated tip of its rostrum and the excessively minute subhorizontal spine with which the inner angle of its tibiæ is armed, will of themselves at once remove it from the members of that group. Amongst the *Laparocerus* it (or at any rate the sex which I have examined) is remarkable for its slender, elongate form and comparatively depressed, brownish-piceous surface, for its rostrum being short, thick, subquadrate, and densely and minutely punctulated, but only slightly channeled, by its thick forehead having a very deep longitudinal fovea between the eyes, and by its prothorax being rather abbreviated, much truncated (and faintly subsinuate) along its anterior edge, and with the double system of punctures comparatively dense and well defined. The individual described from was taken by myself, during April 1858, in the lofty Pinal of Tarajana, above San Bartolomé, in the centre of Grand Canary.

### 537 *Laparocerus crassifrons*

*L. niger* vel piceo-niger, parum nitidus, plus minus dense et grosse submetallico-squamoso-tessellatus, capite convexo, crasso, rostro crasso subtriangulari grosse denseque punctato et profunde canaliculato, oculis sat parvis rotundatis, prothorace convexo, punctato punctulisque minutis intermedus dense irrorato, elytris oblongo-subovalibus, callo humerali obsoleto, punctato-striatis, interstitiis vix punctulatis et pilis brevibus suberectis remotis præsertim postice obsitis, antennis rufo-ferrugineis, pedibus rufo-piceis

*Mas* angustior, nitidior, elytris profundius striatis

*Fœm* latior, paulo opacior, elytris minus profunde striatis — Long corp. lin.  $3\frac{1}{2}$ –5

*Laparocerus crassifrons*, Woll., *Ann Nat Hist* VI 220 (1863)

*Habitat* sub lapidibus scoriusque in regionibus valde elevatis Teneriffæ, usque ad 9000' s m ascendens

The present *Laparocerus*, which is most variable in stature, seems to be peculiar to the lofty altitudes of Teneriffe which are characterized by the presence of the *Spartium nubigena* (or "Retama"), above the sylvan districts, and embracing from about 6000 to 9000 feet above the sea. In such situations it abounds, beneath scorix, on the elevated Cumbre adjoining the Cañadas, above Ycod el Alto, as well

as on the *opposite* Cumbre, above the Agua Mansa,—on both of which I met with it in profusion during May 1859, and on the former of which it has lately been captured by Dr Crotch

The *L crassifrons* may be known by its convex head and thick, subtriangular, coarsely punctured rostrum, by its convex and rather densely punctured prothorax (on which the larger and smaller systems of punctures are strongly expressed), by its somewhat oblong-oval elytra (which have their humeral callus and the punctures of their interstices obsolete), and by its surface being more or less clothed with robust, yellowish-brown, and but faintly metallic, piliform scales

### 538 *Laparocerus scapularis*, n sp

*L* fere ut *L crassifrons*, sed multo minor, rostro graciliore (vix longiore) et minus triangulari, oculis minoribus rotundioribus et paulo magis prominentibus, prothorace minus profunde sed magis confertim punctato, elytris vix magis pilosis necnon ad apicem ipsum sensim magis deflexis, antennis pedibusque brevioribus et sæpius pallidioribus, illarum scapo magis curvato, horum tarsis sensim angustioribus—Long corp ln  $2\frac{1}{2}$ -3

*Habitat* Teneriffam excelsam, in usdem locis ac præcedens sub lapidibus et scoris inter arbusculas *Spartu nubigenæ* humi jacentibus etiam ultra 9000' s m ascendit

In habits the *L scapularis* does not differ from the *L crassifrons*, with which indeed it is found in company—on the elevated Cumbres of Teneriffe, from about 6000 to at least 9000 feet above the sea. It may, however, be easily recognized from it by its considerably smaller bulk, by its rostrum being slenderer, and (though scarcely longer) rather *straighter* at the sides, or less triangular, by its eyes being smaller, rounder, and more prominent, by its prothorax being less deeply and more closely punctured, by its elytra being usually perhaps a trifle more pilose, and just perceptibly more decurved at their apex, and by its antennæ and legs being shorter and generally paler, with the scape of the former more curved, and the feet of the latter distinctly narrower. I took it less abundantly than the *L crassifrons*, and I have three specimens now before me which were captured on the Cañadas by Dr Crotch

### 539 *Laparocerus æthiops*, n sp

*L* ater, nitidus, calvus, rostro subconcavo, sat profunde longitudinaliter punctato, leviter canaliculato, prothorace subconvexo, ad latera rotundato, æqualiter et sat profunde punctato punctulisque minutissimis intermediis indistinctis irrorato, elytris punctato-striatis, interstatis punctulis perpaucis minutissimis notatis, an-

tenuis tarsisque ferrugineis, femoribus tibusque pieco-nigris, genibus rufescentioribus—Long corp lin  $3\frac{1}{2}$ —4

*Habitat* in montibus ins Hierro, sub lapidibus in graminosis apertis degens

The bald, shining, and intensely black surface of this species, combined with its rather excavated, or concave, rostrum, its evenly punctured and laterally-rounded prothorax and the excessively minute punctules of its interstices, will serve to separate it from all the other *Laparoceri* here enumerated. So far as I have observed hitherto, it is confined to the lofty elevations of Hierro—where, on the 21st of February 1858, I met with it, beneath stones, on the open grassy Cumbre immediately above the district of El Golfo, whilst crossing the (comparatively flat) mountain-region which constitutes the central ridge, or backbone, of that remote island.

#### 540 *Laparocerus hirtus*, n. sp.

*L. niger*, vix subænescens, nitidus, paice submetallico-squamoso-tessellatus pilisque longissimis mollibus erectis præsertim in elytris obsitus, prothorace parvo, breviusculo, subconvexo, grosse punctato sed punctulis intermediis minutissimis fere obsoletis, elytris oblongis, profunde punctato-striatis, interstitiis alternis (præsertim postice et ad latera) tuberculato-inæqualibus, tuberculis paulo squamoso-fasciculatis, antennis tarsisque ferrugineis, femoribus tibusque ferrugineo-piceis—Long corp lin vix 4

*Habitat* in montibus Canariæ Grandis, semel tantum lectus

The exceedingly elongate, soft, and erect hairs with which this *Laparocerus* is rather densely studded (particularly on its elytra), in conjunction with the large but not very deep punctures of its small and transverse prothorax (on which the intermediate punctules appear to be almost obsolete), and its oblong and deeply punctate-striated elytra, which have their alternate interstices (at any rate towards the sides and behind) undulated with large and slightly squamose tubercles, will sufficiently characterize it. It is barely possible that it may be but an insular modification (peculiar to Grand Canary) of the following species,—a question, however, which can be decided only by the inspection of further material. The *unique* example from which the above diagnosis has been drawn out was captured by myself on the mountains of Grand Canary (I believe, in the lofty Pinal above San Bartolomé, in the district of Tarajana), during the spring of 1858.

#### 541 *Laparocerus inæqualis*

*L. ænescenti-niger*, nitidus, paice submetallico-squamoso-tessellatus

pilisque plus minus elongatis erectis fulvescentibus præsertim in elytris parce obsitis, prothorace parvo, angusto, subcylindrico-conico, sat grosse sed vix profunde punctato punctulisque minutissimis intermediis dense minorato, elytris latiusculis, subquadrato-oblongis, punctato-striatis, interstitiis alternis valde tuberculato-inæqualibus, tuberculis paulo fulvescenti-squamoso-fasciculatis, antennis, tibus tarsisque ferrugineis, femoribus ferrugineo-piceis—Long corp ln 3-4

*Laparoceus inæqualis*, Woll, *Ann Nat Hist* vi 220 (1863)

*Habitat* Teneriffam sylvaticam, in lauretis editioribus supra Tagananam Maio exeunte A D 1859 sat copiose depressus

This distinct and beautiful *Laparoceus* appears to be confined to the damp laurel-clad regions of a high elevation in Teneriffe. It may readily be known by its distinctly ænescent tinge, by its surface being more or less sparingly clothed with dull metallic-yellow, or brownish-golden, scales, as well as studded (particularly on the elytra) with distant and suberect fulvescent hairs, by its narrow, subcylindric-conical prothorax being beset with rather large but not very deep punctures, and with the intermediate punctules close and apparent, and by its wide, squarish-oblong elytra having their alternate interstices more powerfully undulated (and fasciculated) with large squamose tubercles than is the case in the *L. hirtus*—an arrangement which causes them to be, also, for the most part, more conspicuously *tessellated* with small tufts of fulvescent, or brownish-golden, scales.

The specimens (34 in number) which I have examined hitherto of the *L. inæqualis* were all brushed from out of the rank fern, and other vegetation, at the edges of the Vueltas leading down to Taganana, through the dense forest of laurels, from the Cumbre above it, during May 1859.

#### 542 *Laparoceus globulipennis*, n. sp.

*L.* speciei præcedenti similis, sed colore squamisque omnino obscurioribus, elytris sensim rotundationibus (i. e. paulo minus oblongis), ad humeros vix magis prominentibus, profundius punctato-striatis, pilis paulo longioribus, magis mollibus ac minus fulvescentibus obsitis, necnon in interstitiis alternis minus conspicue fasciculato-tuberculatis—Long corp ln 4

*Habitat* in locis similibus ac præcedens, sed in Palma (nec Teneriffa)

The only two examples of this species which I have seen were taken by myself, during May 1858, in the damp laurel-woods towards the upper extremity of the Barianco de Galga in Palma. It would

seem, therefore, to be the *representative* in that island of the Tene-  
riffan *L. inæqualis*, for I think it would certainly be unsafe to treat  
it as an insular modification of the same. It may be known from  
its ally by the altogether darker colour both of its surface and clothing,  
and by its elytra being a little rounder or more ventricose, with the  
punctures of their striæ considerably larger, the hairs with which  
they are studded somewhat longer, softer, and less fulvescent, and  
with their alternate interstices less conspicuously undulated with ob-  
tuse tubercles—the tubercles themselves being not only less elevated,  
or defined, but also less clothed (and more darkly so) with decum-  
bent scales

543 *Laparocerus occidentalis*, n. sp.

*L. niger* vel fusco-niger, subnitidus, parce et obscure submetallico-  
squamoso-tessellatus sed pilis superadditis carens (tantum setulis  
minutissimis brevissimis demissis obsitus), rostro subplano, pro-  
thorace angustulo, subconvexo, ad latera rotundato, profunde et  
æqualiter punctato punctulisque minutissimis intermediis distinctis  
crebre irrorato, elytris ovalibus, latiusculis, crassis, convexis, punc-  
tato-striatis, antennis pedibusque breviusculis, robustis, illis tal-  
is-sisque ferrugineis, scapo curvato, femoribus tibisque piceis; pe-  
dibus posticis præsertim brevibus.—Long corp. lin.  $4\frac{1}{2}$

*Habitat* in ins. Hierro, ad rupes humidas sylvaticas excelsas in  
regione "El Golfo" dictâ mense Februario a. d. 1858 a meipso repertus

The unique example from which the above diagnosis has been  
compiled was captured by myself, during February 1858, from amongst  
vegetation on some wet rocks at a lofty elevation in the island of  
Hierro—namely, on the wooded mountains above the district of El  
Golfo. It may readily be known by its large size and only slightly  
shining, obscure- (though scarcely brownish-) black surface, by its  
rostrum being somewhat flattened, and with the channel not much  
impressed, by its prothorax being regularly, evenly, and deeply punc-  
tured, with the minute intermediate punctules close and distinct, by  
its elytra being thick, oval, and convex (the alternate interstices *not*  
being tubercled as in the three preceding species), by its antennæ  
and legs (particularly the posterior pair) being rather short and ro-  
bust (the former, also, having their scape a good deal curved), by  
its scales being of a dull brownish-metallic hue, and by its surface  
being free from additional erect hairs, though beset on the elytra  
(especially behind) with excessively abbreviated and minute decum-  
bent setæ. The *L. occidentalis*, *globulipennis*, *inæqualis*, and *hirtus*,  
although most distinct *inter se*, belong to much the same *type*, and  
perhaps the *obtriangularis* might be included with them

544 *Laparocerus obtiangularis*, n sp

*L. niger*, vix subænescens, subnitidus, parce metallico-squamoso-tessellatus pilisque longiusculis suberectis robustis nigrescentibus in elytris parce obsitus, rostro angustulo, longiusculo, oculis subdepressis, prothorace subcylindrico, grosse et profunde rugoso-punctato, in disco antico leviter canaliculato, elytris obtriangularibus (basī latis truncatis, ad humeros subporrectis, apicem versus gradatim acutioribus), profunde punctato-striatis, antennis tarsisque ferrugineis, femoribus tibusque fusco-piceis —Long corp ln 3

*Habitat* Teneriffam sylvaticam, semel tantum lectus

The only example (a female) which I have yet seen of this *Laparocerus* was taken by myself in the sylvan regions of Teneriffe—I believe, at the Agua Mansa. It may immediately be recognized by its rather elongate rostrum and its subcylindrical rugosely punctured prothorax, by the obtriangular outline of its sparingly setose elytra (which are wide and truncated at the base, with the shoulders slightly porrect and gradually acuter to the apex), and by its surface being tessellated with robust, greenish-metallic scales. It is probable, however, that the peculiarity in the shape of its elytra would (as in the case of the *Atlantis canariensis*) be less expressed in the male sex.

545 *Laparocerus ellipticus*

*L. vel ferrugineus vel piceus*, subnitidus, dense et grosse sericeo-metallico-squamoso-tessellatus pilisque elongatis suberectis versus elytiorum apicem obsitus, rostro crasso, leviter canaliculato, oculis magnis, prothorace parvo angusto, subcylindrico, ruguloso-subalutaceo, parce et leviter punctato, per basin subemarginato, elytris convexis, ovato-ellipticis (versus humeros angustis inde pone medium gradatim latoribus, sed ad apicem parum subito acutis), basī conjunctim trisinuatis, leviter punctato-striatis, interstitiis alternis plus minus læte tessellatis, antennis subrobustis pedibusque rufo-ferrugineis (femoribus tibusque sæpe obscurioribus)

*Mas* vix minor, angustior, tibus paulo magis curvatis necnon ad apicem internum distinctius uncinatis

*Fœm* vix major, lator, tibus paulo rectioribus, ad apicem internum fere simplicibus —Long corp ln 4-5

*Laparocerus ellipticus*, *Woll*, *Ann Nat Hist* xi 220 (1863)

*Habitat* in sylvaticis excelsis Teneriffæ et Palmæ, vel inter muscos lichenesque ad truncos arborum crescentes, vel sub cortice laxo latitans

This large and beautiful *Laparocerus*, which I have observed hitherto only at a rather high elevation within the sylvan districts of Teneriffe and Palma, is at once conspicuous by its sericeous, densely squamose surface (the preponderating colour of the scales being either an obscure metallic green or a pale coppery or golden brown) and

by its peculiar outline,—the prothorax being extremely small and narrow, whilst the elytra are inflated and convex (being much rounded-off at the shoulders, gradually widened to behind the middle, and then suddenly contracted so as to cause the apex to be pointed and acute) In minor respects, it may be known by its large (but not particularly prominent) eyes, by its prothorax (which is subemarginated along its posterior edge) having its punctures rather fine and tolerably distant, by its elytra (which are somewhat transverse at their base) having their alternate interstices more or less conspicuously tessellated, and their apical portion beset with a few long and suberect hairs, and by its antennæ being a trifle thicker than is the case in the ordinary *Laparocerus*

Although by no means common, the *L ellipticus* appears to be universal throughout the wooded regions of Teneriffe, particularly in the laurel-forests of a rather high elevation I have taken it by brushing the dense herbage in the rankest and dampest spots, and also from amongst the moss and lichen growing on the trunks of trees, as well as from beneath dead, loosened bark (where it delights to secrete itself) In such situations I have frequently met with it at Las Mercedes, Taganana, the Agua Garcia, &c It was also captured by the Rev R T Lowe at a lofty altitude on the mountains above the Agua Mansa, and it has recently been communicated by the Barão do Castello de Parva During May of 1858 I obtained it, in similar situations, in the island of Palma

#### 546 *Laparocerus lepidopterus*, n sp

*L niger* vel piceo-niger, subopacus, dense submetallico-squamoso-tessellatus pilisque plus minus elongatis mollioribus erectis in elytris obsitis, rostrum crassiusculo, subdepresso, leviter canaliculato, oculis magnis, oblongis, haud valde prominentibus, prothorace ad latera rotundato, in disco leviter sed utrinque profundius subremote punctato punctulisque intermediis valde distinctis dense irrorato, obsolete carinato, elytris oblongo-ovalibus, punctato-striatis, antennis tarsisque rufo-ferrugineis, femoribus tibusque sæpius obscurioribus

*Vari*  $\beta$  [an species?] Vix minor, colore obscuriore, nitidior, prothorace paulo levius punctato, elytrorum pilis brevioribus [*Ins Canaria Grandis*]—Long corp lin 4-4½

*Habitat* in Teneriffa, Palma et Hierro, in sylvaticis rarissimus "*vari*  $\beta$ " ad Canariam Grandem pertinet

The four examples from which the above diagnosis has been compiled, collected in widely distant localities (indeed, each of them, in different islands), have perhaps fewer distinguishing characteristics

than is the case with any of the other *Laparocer* here enumerated, and I feel therefore that further material must be obtained before we are able to pronounce satisfactorily on the limits of the species, and to decide whether or not what I have now regarded as the "var  $\beta$ " (from Grand Canary) should rank as a separate though nearly allied form. The *L. lepidopterus* appears to be a sylvan insect, and its most marked features seem to consist in its surface being somewhat opaque, of a dull piceous-black, and densely tessellated with brownish- or fulvo-metallic scales, whilst its elytra are additionally beset with fine, erect, elongate hairs, in its rostrum being thickish and flattened, and with the central channel but lightly impressed anteriorly, in its eyes being large and oblong, but not very prominent, in its prothorax being rather sparingly punctured (finely so *on the disc*), but with the intermediate punctules dense and conspicuous, and in its oblong-ovate elytra not being very coarsely punctate-striated. Whether the males present any tibial modifications I am unable to state, the female sex only having come hitherto beneath my notice.

Of the specimens now before me, the first ("var  $\beta$ ") was taken in the lofty Pinal of Grand Canary above San Bartolomé (in the district of Tamajana), the second at the Agua Garcia in Tenerife, the third in Palma (I believe, in one of the wooded Barriancos in the east of the island), and the fourth in the forest-region of El Golfo, on the western slopes of Hierro. The last one has the additional erect pile of its elytra rather shorter than is the case with the second and third, but it does not appear to differ from them in anything essential. The Grand-Canarian one, however, is a trifle smaller, darker, and more shining than the rest, with its prothorax a little more finely punctured and the hairs of its elytra less developed, and it is possible therefore (as already intimated) that it, at all events, may be specifically distinct.

#### 547 *Laparocerus semiculus*, n. sp.

*L. niger* vel piceo-niger, subopacus, sat dense cinereo-metallico-squamoso-tessellatus pilisque longiusculis erectis ad elytrorum apicem solum obsitus, prothorace dense et minutissime punctulato punctisque majoribus sed levissimis, valde remotis (in disco antico fere obsoletis) parce adperso, carinâ lævi tenui sensim (præsertim postice) instructo per basin distincte marginato, elytris oblongis, valde profunde punctato-striatis (punctis magnis), pedibus rufo-piceis.—Long corp. lin. 4.

*Habitat* in Canaria Grandi, haud procul ab urbe Las Palmas captus. Although I have but two, imperfect examples of this *Laparocerus*

to judge from, nevertheless, since they certainly cannot be referred to any of the other species here enumerated, I have ventured to treat them as distinct—believing, in addition, that their mere *habitat* alone would of itself tend to that conclusion. They were captured near Las Palmas, in Grand Canary, but whether in the sandy region immediately to the north of the town or on the Isleta, I cannot now exactly recall. Judging therefore from the specimens before me, I may add that the *L. semiculus* appears to be mainly characterized by the cinereous-metallic scales with which it is tessellated, and by its surface being free from erect hairs except at the apex of its (oblong and very deeply punctate-striated) elytra. Its prothorax is most densely covered with minute but rather coarse punctules, and has some larger but extremely shallow and distant ones intermixed, whilst a fine and obscure polished keel is traceable down its disc—more especially behind.

#### 548 *Lapanocerus rarus*, n. sp.

*L. picco-niger* vel *piccus*, parum nitidus, sericeo-metallico-squamoso-tessellatus sed pilis erectis carens, rostrum sæpius rufescentiore, subtereti, supra planiusculo, vix canaliculato sed postice inter oculos foveâ impresso, minute et leviter punctulato, prothorace parvo, minute et leviter punctulato punctisque paulo majoribus sed levibus mucronato, antice sæpius obsolete subcarinato, elytris ovalibus, punctato-striatis, interstitiis alternis plus minus distincte tessellatis, antennis pedibusque rufo-ferrugineis, funiculi art. 2<sup>do</sup> primo sensim longiore.

*Mas* paulo nitidior, tibus ad apicem internum distinctius horizontaliter uncinatis, anticis intus vix minutissime subcrenulatis.

*Fœm* paulo opacior, tibus fere simplicibus.

*Vari* β Elytris profundius punctato-striatis, pedibus paulo obscurioribus (et vix brevioribus). [*Ins* Fuerteventura]—Long corp. lin.  $3\frac{1}{3}$ – $4\frac{1}{3}$ .

*Habitat* in montibus Lanzarotæ et Fuerteventuræ, sat rarus.

The present *Lapanocerus* appears to be peculiar to Lanzarote and Fuerteventura—though it is more particularly the former in which I have hitherto observed it, since the single example which I have yet seen from the latter has a few trifling characters of its own in which it differs from the Lanzarotan type, nevertheless I cannot regard them as indicative at the utmost, of more than a mere insular variety, or phasis, of the species. On the hills above Haria, in the north of Lanzarote, it was taken by Mr Gray and myself, during January 1858, and I subsequently met with it in the same locality during March of the following year. It was likewise captured, by

the Rev R T Lowe, on the summit of the Monte Famara, more than 2000 feet above the sea

The *L. riasus* may be known by (*inter alia*) its surface being densely tessellated with fine and sericeous (though metallic) scales, but altogether free from additional erect hairs, by its rostrum (which is only minutely and lightly punctulated, and usually subrufescent) being comparatively subcylindric, though flattish above and but obscurely channeled, by its (small) prothorax being delicately and faintly punctured (though with a few somewhat larger, but shallow, punctures intermixed), and by the oval outline of its elytra

#### 549 *Laparocerus mendicus*, n sp

*L. fusco-niger*, subnitidus, parce cinereo- (vix submetallico-) squamoso-tessellatus setulisque brevissimis suberectis in elytris obsitus, rostro nitidiore, angustulo, concavo-canaliculato, parce et leviter punctato, oculis rotundatis, prominentibus, prothorace parce et profunde punctato punctulisque minutissimis levibus intermediis dense irrorato, elytris ovalibus, profunde punctato-striatis, antennis pedibusque rufo-ferrugineis, his plus minus obscurioribus funiculi aut<sup>o</sup> 2<sup>do</sup> primo sensim longiore

*Maxillis* anticis vix magis sinuatis, posticis intus versus apicem obsolete subseriatis

*Fem* tibus simplicibus — Long corp lin 3-3½

*Habitat* in ins Hierro, sub lapidibus in montibus haud infrequens

The brownish-black surface of this *Laparocerus*, which is sparingly clouded with dull-cinereous scales (which are almost free from any metallic tinge), and has its elytra beset with very short and rather stiff hairs, which are extremely abbreviated, and subdecumbent, anteriorly, in conjunction with its narrowish, concave, somewhat polished and remotely sculptured rostrum, its prominent eyes, its deep and distantly punctured prothorax, and its coarsely punctate-striated elytra, will sufficiently characterize it. As in the case of the last species and the four following ones, the second joint of its funiculus is very distinctly longer than the first. The *L. mendicus* appears to be peculiar to the mountains of Hierro, in which island I captured it, during February 1858, from beneath stones, on the hills around Valverde, as well as on the open grassy Cumbre to the south of S Andre

#### 550 *Laparocerus obscurus*, n sp

*L. niger*, subopacus minute et parce cinereo-squamoso-irroratus setulis erectis carens (versus apicem elytrorum setulis brevibus subdemissis parce obsitus), rostro minute et leviter punctato, concavo-canaliculato, oculis sat parvis, rotundatis, prothorace subconvexo parum profunde punctato punctulisque minutissimis intermediis

levibus nrorato, elytris subtilissime subalutaceo-rugulosis, punctato-striatis, per basin trisinuatis, antennis pedibusque rufo-piceis, funiculi art<sup>o</sup> 2<sup>do</sup> primo multo longiore

*Mas gracilis*, tibus anticis intus versus apicem sat distincte subexcavato-sinuatis

*Fem* adhuc latet —Long corp  $\ln$  3

*Habitat* Teneriffam, a meipso semel tantum repertus

The unique example from which the above diagnosis has been compiled was captured by myself in Teneriffe, but I have unfortunately no recollection as to its precise locality. I believe, however, that it was probably found either in the vicinity of Orotava or else of Sta Cruz. Luckily the species has such decided characters of its own that a single individual is abundantly sufficient for distinguishing it. Perhaps its most remarkable feature is the comparatively immense length of its second funiculus-joint, which is almost (if not indeed quite) twice as long as the basal one. But apart from this, the *L. obscurus* may be further recognized by its black surface, which is sparingly clothed with minute cinereous scales, or pubescence, but which is free from additional erect hairs, and by its rather opaque, subalutaceous, and basally-trisinuated elytra. Its eyes are somewhat small and round, and its prothorax (which is a little convex) is deeply and sharply punctured, but with the diminutive intermediate punctules shallow and not very dense. Its male sex (of which I can alone speak) is slender in outline, but in all probability the females would be broader and more ovate.

### 551 *Laparocerus gracilis*, n. sp.

*L. gracilis*, piceus vel fusco-piceus, subnitidus, parce cinereo-squamoso-nebulosus, rostro subconcano-canaliculato, minute et leviter punctato, oculis rotundatis, prominentibus, prothorace parce punctato punctulisque minutissimis intermedus obsoletis nrorato, elytris elongato-ovalibus, leviter punctato-striatis, antennis pedibusque rufo-ferrugineis, funiculi art<sup>o</sup> 2<sup>do</sup> primo sensim longiore

*Mas* gracilior (interdum valde gracilis), pilis carens, tibus anticis intus versus apicem sat profunde excavatis

*Fem* elytris versus apicem pilis perpaucis suberectis obsitis, tibus simplicibus —Long corp  $\ln$   $2\frac{1}{2}$ – $3\frac{1}{2}$

*Habitat* Gomeiam, in clivis mox supra oppidum Sanctum Sebastianum, Februario ineunte a. d. 1858, captus, in foliis *Chrysanthemi frutescentis* Linn. præcipue gaudet

This is one of the most distinct *Laparoceri* hitherto detected, and apparently peculiar (so far at least as observed hitherto) to Gomera —where, at the beginning of February 1858, I brushed it from off

the plants of the *Chrysanthemum frutescens*, Linn (known locally as the "Magarza"), upon the slopes of the low mountain-ridge immediately outside (and to the north of) San Sebastian. It was in tolerable profusion, and many of the specimens were *in situ*. It was captured also by Mr Gray, though more sparingly, in the same locality. The *L. gracilis* may be known by its slender outline (particularly of the male sex), by its remotely (but not deeply) punctured prothorax, by its elongate-oval (or elliptic) elytra, which fall away a good deal at the shoulders, and by its surface being more or less clothed, and tessellated, with cinereous scales, which have scarcely any metallic tinge. Its males (which are often extremely narrow) have their front tibiae a good deal scooped-out towards their apex internally, and are free from additional erect pile, but in the opposite sex there are a few tolerably robust hairs scattered over the apical portion of the elytra.

#### 552 *Laparocerus dispar*, n. sp.

*L. fusco-piceus*, subnitidus, parce cinereo- (vix submetallico-) squamoso-nebulosus sed pilis erectis carens, rostro nitidiorie, subtereti supra planiusculo vix canaliculato, minute punctulato, oculis rotundatis, prominentibus, prothorace parvissime sed profunde punctato, elytris convexis, punctato-striatis, antennis robustis pedibusque rufo-ferrugineis, funiculi art<sup>o</sup> 2<sup>do</sup> primo sensim longiore. *Mas* minor, multo angustior, prothoracis punctulis minutissimis intermedus obsoletis, tibus anticis vix sinuatis.

*Fœm* major, multo crassior, prothoracis punctulis minutissimis intermedus distinctis, tibus simplicibus.—Long corp. lin 2-2½.

*Habitat* Lanzaotam borealem, sub lapidibus in aridis vix supra "Salinas" captus.

The only four examples which I have yet seen of the present insect were captured on the rocky ground at the base of the lofty cliffs known as the "Rusco," immediately behind the Salinas, in the extreme north of Lanzaote. One of them was taken by Mr Gray, and the other three by myself. The species is remarkable, *inter alia*, for the unusual dissimilarity of its sexes—the females being more decidedly broader and inflated, as compared with the males, than is the case in the generality of the *Laparoceri* hitherto detected. It may be further recognized by its small size and brownish-piceous hue, by its surface being sparingly clouded with cinereous, or fulvo-cinereous, scales, but destitute of erect hairs, by its prothorax being very remotely, but rather deeply, punctured (and with the minute intermediate punctules obsolete in the male sex, but sufficiently conspicuous in the female), and by its antennæ, particularly of the

males, being robustest than in the ordinary *Laparocer*, and with their scape more *gradually* clavated,—though I think, nevertheless, from its manifest affinity with the species with which I have associated it, that it is better referred to *Laparocerus* than to *Atlantis*

### 553 *Laparocerus vestitus*, n. sp.

*L. niger* vel *piceus*, nitidus, parce cinereo-squamoso-nebulosus pilisque elongatis erectis mollibus obsitus, rostro leviter punctato, concavo-canaliculato, prothorace minutissime et dense punctulato punctisque majoribus (præsertim versus latea) parce minorato, elytris oblongo-ovalibus, profunde punctato-striatis, interstitiis densissime sed obsoletissime et levissime subpunctulatis punctulisque paulo majoribus (sed minutis) paucissime minoratis, antennis pedibusque piceo-ferrugineis, funiculi ant<sup>o</sup> 2<sup>do</sup> primo distincte longiore

*In utroque sexu* tibus inter se fere similibus

*Var. β affinis* Elytris vix subconvexioribus, minus profunde punctato-striatis sed punctulis minutissimis paulo distinctioribus — Long corp ln 2 $\frac{2}{3}$ –3

*Habitat* Teneriffam, sub lapidibus in inferioribus, passim

This appears to be the common *Laparocerus* throughout the dry and dry region around the Puerto Orotava, in Teneriffe, and I think I may also add, around S<sup>ra</sup> Cruz,—for the very slight differences which the examples from that district present, as contrasted with those from Orotava, cannot, I imagine, be regarded, at the utmost, as indicative of more than a local phase of the species. The *L. vestitus* may easily be known by its surface being sparingly clouded with rather robust subcinereous scales, and beset all over (though particularly on the elytra) with soft, erect, elongate hairs, by its prothorax being densely covered with minute punctules, and remotely studded with larger punctures, by the second joint of its funiculus being considerably longer than the first, and by its sexes being *almost* similar both in outline and tibiae

It is possible that what I have treated as the “*var. β*” may be specifically distinct, though (as just mentioned) I do not believe such to be the case. It seems to be the form which obtains around S<sup>ra</sup> Cruz, and differs from that from the vicinity of Orotava in having its elytra just perceptibly more inflated or convex, and less coarsely punctate-striated, though with their minute and closely-set punctules perhaps more evident

Around Orotava and the Puerto the state which I have assumed to be the typical one of the *L. vestitus* is universal, in which district it was found also by Mr Gray. The *var. β* is equally common

in the neighbourhood of S<sup>ta</sup> Cruz—where I have frequently taken it, and whence it has also been communicated by the Barão do Castello de Paiva

#### 554 *Laparocerus sulcirostris*, n sp

*L. niger*, subopacus, compactus, pice et obscure subfulvescenti-squamoso-nebulosus sed pilis carens (sc setulis brevissimis pubiformibus subdemissis ægre observandis obsitus), rostro brevi, subtriangulari, crasso, minutissime punctulato, profunde et argute sulcato, oculis parvis, subdemissis, prothorace subconico, minute et parce punctato punctulisque minutissimis intermediis levibus densissime obsito, elytris parallelo-oblongis, per basin conjunctim subemarginato-truncatis, ad humeros subporrectis, punctato-striatis, interstitiis subtilissime et densissime subalutaceo-rugulosis, antennis pedibusque piceo-ferrugineis, funiculi art<sup>ib</sup> 1<sup>mo</sup> et 2<sup>do</sup> elongato-obconicis, subæqualibus

*In utroque sexu* (nisi fallor) tibis fere simplicibus --Long corp  
ln 2½

*Habitat* in montibus Canariæ Grandis, semel tantum lectus

The present *Laparocerus* and the following one, in their curiously compact and rather parallel outline and basally subemarginated elytra (causing the shoulders to be comparatively, though slightly, porrect), in conjunction with their thick, subtriangular, sharply channeled rostrum, and their small and less prominent eyes, would seem, at first sight, almost to merit *generic* isolation from the species with which I have associated them, nevertheless I cannot detect any structural characters of sufficient importance to warrant their removal from the remainder,—particularly since, in external contour, they (especially, however, the *L. sulcirostris*) are singularly suggestive, albeit on an absurdly diminutive scale, even of the *L. morio*, which is the actual *type* of the group—indeed far more so than is the case with most of the *Laparoceri* here described. And yet, in spite of this, their minute size, and most of their other features, would certainly tend rather to affiliate them with the *L. tessellatus* and its allies than with the comparatively gigantic insects with which I have commenced the genus

Unluckily I have but a single individual of the *L. sulcirostris* to judge from, nevertheless I believe it to be truly distinct from the following species. It was taken by myself on the mountains above San Mateo, in Grand Canary, during the spring of 1853

#### 555 *Laparocerus compactus*, n sp

*L. præcedenti* similis, sed minor, subpicescentior, paulo densius squamosus setulisque sensim longioribus (sed brevibus) piliformibus sub-

erectis dense obsitus, oculis etiam subminoribus, prothorace vix densius profundiusque punctulato, elytris per basin vix minus conjunctim emarginatis, interstitis paulo minus rugulosis (quare minus opacis), tarsis sensim angustioribus, brevioribus, funiculi art.<sup>is</sup> 1<sup>mo</sup> et 2<sup>do</sup> (subæqualibus) distincte brevioribus et (præsertim illo) magis obovatis (i. e. minus elongato-obconicis) — Long corp lin  $1\frac{3}{4}$ –2

*Habitat* Canariam Grandem, in usdem locis ac præcedens

I believe that the four specimens from which the above diagnosis has been compiled cannot be referred to the *L. sulcostriatus*, though (as already stated) they have much in common, both in outline and general aspect, with that insect. They are, however, considerably smaller and more densely clothed—both with dull fulvescent scales and short suberect setæ (the latter being very evidently longer than is the case in that species), their eyes are, if anything, even still more minute, their prothorax is a trifle more thickly and coarsely punctulated, their elytra are perhaps somewhat less conjointly scooped out (or more straightly truncated) at the extreme base, and with the interstices less perceptibly rugulose (and therefore rather less opaque), their tarsi are narrower and more abbreviated, and the first and second joints of their funiculus (although subequal) are manifestly shorter—the former being *relatively* a little thicker and less obconical (or more obovate)

Like the *L. sulcostriatus*, the present species was captured, during the spring of 1858, on the mountains of Grand Canary

### 556 *Laparocerus tessellatus*

*L. ovatus*, piceo- vel fusco-niger, subnitidus, interdum obsolete subænescens, cinereo-fulvescenti-submetallico-squamoso-tessellatus sed pilis superadditis fere cæcis, rostris planiusculo, leviter canaliculato, minute et parce punctulato, prothorace profunde et plus minus dense punctato, elytris convexis, punctato-striatis, antennis pedibusque vel rufo- vel piceo-ferrugineis

*In utroque sexu* tibus inter se fere similibus — Long corp lin  $2-2\frac{2}{3}$

*Omnis tessellatus*?, *Brulle, in Webb et Berth (Col)* 72 pl 1 f 15 (1838)

*Habitat* in Teneriffa, Palma et Hierro, in intermediis editionibusque hinc inde vulgaris.

This appears to be rather a common insect in certain districts of intermediate and lofty elevations in Teneriffe, and it was taken by Mr Gray in Palma also, and by myself in Hierro. In Teneriffe (where it was likewise captured by Dr Clotch) it seems to be widely spread over the island, thus, I have met with it in the laurel-woods above Taganana, at Las Mercedes, La Esperanza, Souza, the Agua

Garcia, Ycod el Alto, and at the Agua Mansa, as well as, in profusion, on the ascent to the Cumbre above the last of these localities. Although M. Brullé's description and figure are alike absolutely worthless, I am induced to refer his *Omas tessellatus* to the present species through the simple fact of the small size which he records for it, for I know of no Canarian *Laparocerus* which would so well tally with it in that respect as this common Teneriffan one and the *L. obsitus*, whilst if it had been the latter to which he wished to allude, he could scarcely have failed to notice the suberect setæ with which that insect is densely studded.

The *L. tessellatus* varies a little according to the region in which it occurs,—being, on the average, somewhat larger, and with the limbs correspondingly a little more developed, within the sylvan districts than elsewhere, though I believe I am able to connect its two extremes of form most completely. As compared with the other *Laparocerus* here described, it may be known by its small size and ovate outline, by its more or less strongly punctured prothorax, and by its (frequently subænescent) surface being obscurely tessellated with cinereous-brown scales (which have often a yellowish, as well as slightly submetallic, tinge), but free from additional erect hairs—it being merely beset with short and subdecumbent setæ which are only traceable beneath a lens.

#### 557 *Laparocerus obsitus*, n. sp.

*L. præcedenti similis, sed plerumque paulo minor, setulis suberectis in elytris obsitus, prothorace minus profunde punctato, postice ad latera vix magis rotundato, elytris sensim oblongioribus, ergo ad latera subrectioribus necnon ad humeros paulo minus rotundatis* — Long. corp. lin.  $1\frac{3}{4}$ – $2\frac{1}{4}$ .

*Habitat* in montibus Canariæ Grandis, hinc inde parum vulgaris.

I am not altogether satisfied that this *Laparocerus* is more than an extreme insular state of the last one, nevertheless, since the *L. tessellatus* seems to remain sufficiently constant in the three islands of Teneriffe, Palma, and Hierro, I can scarcely assume that the decided (even though not very important) differences which the Grand-Canarian insect presents can be in any way the result of mere isolation. The main points, however, in which the *L. obsitus* appears to recede from its ally are in its elytra being rather more oblong (or straighter at the sides, and with the shoulders less falling away), and densely beset with suberect setæ, or short stiffish hairs. Its prothorax is a little more finely punctured and, if any thing, perhaps a trifle rounder laterally. It is widely spread over, and somewhat abundant in, the

intermediate and lofty elevations of Grand Canary—where, during the spring of 1858, I captured it throughout the region of El Monte, and also on the mountain-slopes above San Mateo (on the ascent to the Roca del Soucilho), as well as on the ascent to the old Pinal of Tarajana above San Bartolomé

558 *Laparocerus tenellus*, n. sp

*L. ovatus*, niger, subopacus, subtilissime fulvescenti-cinereo-squamoso-tessellatus sed pilis superadditis carens, rostro gracili, grosse punctato-rugoso, canaliculato, oculis minutis, rotundatis, prominentibus, prothorace densissime et argute rugoso-punctato, elytris leviter punctato-striatis, ad apicem subito decurvis, antennis pedibusque brevibus, illis rufo-piceis, ad basin necnon in funiculo clarioribus, his piceo-nigris, tasis rufescentioribus

*Mas* tibus (præsertim anterioribus) spinâ horizontali armatis

*Fœm* adhuc latet —Long corp lin  $1\frac{1}{2}$ – $1\frac{3}{4}$

*Habitat* in sylvaticis editioribus Teneriffæ, rarissimus

Apparently of the greatest rarity,—the only two specimens which I have seen having been captured by myself, from beneath small stones, at the base of the Organo Rocks, above the Agua Mansa, in Teneriffe. It is the smallest of the *Laparoceri* hitherto detected, and one which may immediately be known by its ovate outline and short, slender limbs (of which the legs are blackish-piceous, though with their tarsi, like the base and funiculus of the antennæ, more rufescent), by its rostrum, which is narrow, being closely and coarsely roughened, by its prothorax being very densely and sharply punctured (the punctures being deep and exceedingly closely packed, but not particularly large), by its eyes being minute, rounded, and prominent, by its elytra being finely punctate-striated, and rather suddenly decurved towards their apex, and by its (black and subopaque) surface being obscurely tessellated with extremely minute fulvo-cinereous scales, but free from additional erect hairs

559 *Laparocerus puncticollis*, n. sp

*L. piceo-niger*, subnitidus, parce sed grosse cinereo- (vix submetallico-) squamoso-nebulosus pilisque clongatis subiectis mollibus in elytris obsitis, rostris prothoraceque profunde, dense et argute punctatis, illo planiusculo vix canaliculato, hoc sat magno subovali, oculis rotundatis, valde prominentibus, elytris nigrescentioribus ( sæpius nigris), suboblongis, punctato-striatis, antennis tarsisque rufo-ferrugineis, femoribus tibusque rufo-piceis

*Mas* tibus anticis intus versus apicem sat profunde excavatis

*Fœm* tibus fere simplicibus —Long corp lin 2

*Habitat* in ins Hieiio, die 16 Feb A.D. 1858 in intermediis parce captus

This very distinct little species I have observed hitherto only in Hierro—where, on the 16th of February 1858, I brushed five examples of it from off vegetation at the edges of the road about midway between Valverde and the district of El Golfo (at an elevation, I should imagine, of not more than perhaps 1000 feet above the sea) It may at once be known by its deeply, closely, and regularly punctured head and prothorax (the latter of which is *proportionally* a little larger, and more oval, than is the case in the generality of the *Lapaocerini*), by its extremely prominent eyes, and by its (oblong) elytra being studded all over with soft, elongate, suberect hairs Its surface is either black or piceous-black (the head and prothorax being rather more picescent than the elytra), and more or less sparingly tessellated with robust cinereous or fulvo-cinereous (and but slightly metallic) scales The front tibiae of its male sex have their inner apical half somewhat conspicuously scooped out

#### Genus 214 **TRACHYPHLEUS**

Geimar, *Ins Spec* 1 403 (1824)

##### 560 *Trachyphleus scaber*

*Curculio scaber*, Linn, *Fru Suec* 176 (1761)

*Trachyphleus scaber*, Schon, *Gen et Spec Curc* 11 490 (1834)

— —, Woll, *Ins Mad* 394 (1854)

— —, *Id*, *Cat Mad Col* 118 (1857)

*Habitat* in intermediis Teneriffæ, sub lapidibus, rarissimus

The common European *T. scaber*, which is universal in Madena, appears to be extremely rare at the Canaries Hitherto indeed I have observed it only in the intermediate elevations of Teneriffe—where, at the end of April 1859, I captured a single specimen from beneath a stone on the open Sierra above the Agua Garcia, and, a week later, four more, on a lofty, grassy headland at the edge of the deep Barranco immediately below Ycod el Alto

#### Genus 215 **LICHENOPHAGUS**

Wollaston, *Ins Mad* 389 tab viii f 1 (1854)

##### 561 *Lichenophagus auctus*, n sp

*L. squamulis minutissimis fusco-nigris et submetallico-fusco-cinereis densissime et obscure tessellatus sed setulis fere carentis (sc brevissimis, ægre observandis), rostro late concavo, argute angustequè canaliculato, antice obscure pallidiore, oculis minutis demissis prothorace breviusculo, ad latera fortiter rotundato, argute sed vix grosse punctato, obscure et irregulariter pallido-trilineato postice*

carinâ mediâ brevissimâ levî instructo, elytris elongato-subovatis (ad humeros gradatim paulo deficientibus, per basin singulatim subrotundatis et postice subito decurvis), suturâ interstitiisque obscure pallido-tessellatis, antennis brevibus, scapo crasso robusto, funiculi art<sup>o</sup> 2<sup>do</sup> aucto (primo sensim majore), reliquis brevissimis subæqualibus moniliformibus—Long corp lin  $2\frac{1}{4}$ - $2\frac{1}{2}$

*Habitat* ins Hierro, in clivis inter mare et oppidum Valverde, mense Februario a d 1858, sub lapidibus parce repertus

Of the present *Lichenophagus* I have seen hitherto but five examples, all of which were taken by myself in the island of Hierro, about midway up the ascent from Port Hierro to Valverde, during February 1858, and it is a curious fact that they are totally distinct specifically from others (the *L. subnodosus*, described below) which I captured at a slightly higher elevation, near to Valverde itself. Apart from minor features, the *L. auctus* is remarkable for its comparatively swollen second funiculus-joint—which, if anything, is *altogether* a trifle larger than the first (not merely in length, but even in *breadth*), whilst the remaining articulations are exceedingly short, subequal, and moniliform. In less important particulars, it may be known by its (rather abbreviated) prothorax being a good deal rounded at the sides, with the punctures well defined but not very large, and with the rudiments of a glabrous central keel at the extreme base, by its elytra (which are not very coarsely punctate-striated) being subovate in outline (that is, a little narrowed anteriorly, with the shoulders a good deal falling away, rather suddenly decurved at the apex, and separately rounded along their base), by the setæ of its entire surface being so minute as to be traceable only under a high magnifying power and by its antennæ being altogether shortish, and with their scape not very much curved.

#### 562 *Lichenophagus tesserula*, n. sp.

*L.* præcedenti similis sed plerumque lætius tessellatus et setulis sensim longioribus (sed brevibus) obsitus, 10stio obscure (nec solum antice) pallidior, prothorace paulo longiore, ad latera minus rotundato, profundius punctato (punctis magnis), simpliciter (postice in medio haud carinato), elytris paulo magis oblongis (ad latera sensim rectoribus, per basin conjunctim subemarginatis, ad humeros oblique truncatos vix magis porrectis, et postice minus subito decurvis), antennis vix longioribus, scapo sensim magis curvato et ad basin etiam robustiore, funiculi gracilioris art<sup>o</sup> 2<sup>do</sup> primo angustiore, reliquis brevibus (sed vix brevissimis)—Long corp lin  $2\frac{1}{4}$ - $2\frac{3}{4}$

*Habitat* in inferioribus intermediisque Teneriffæ, hinc inde vulgaris.

This species appears to be widely spread, at low and intermediate elevations, in the north of Teneriffe—where it occurs, during the

winter and (more particularly) the spring months, from the sea-level to an altitude of about 3000 feet. On the rocky ground along the shore, between the Puerto Orotava and the Lazaretto, I have captured it sparingly, from beneath stones, but a little below the altitude of the Villa it becomes more common—being at times, and in certain spots, extremely abundant. It differs from the *L. auctus* in being, on the average, more brightly tessellated, and beset all over with very evident and rigid (though at the same time short) setæ, in its prothorax being more coarsely punctured, a trifle longer, less rounded at the sides, and free from the glabrous abbreviated keel which is there so evident in the centre behind, in its elytra being more oblong (or a little straighter at the sides, with the shoulders more porrect but obliquely truncate, and slightly scooped-out conjointly along the basal edge), as well as more deeply punctate-striated and more drawn-out towards the apex, and in its antennæ being perhaps a trifle longer, with their scape even thicker still (at any rate at the base) and more flexuose, and with their funiculus slenderer—the second joint being distinctly narrower than the first, and the remaining ones somewhat less moniliform.

### 563 *Lichenophagus persimilis*, n. sp.

*L.* species *L. tessellatam* simulans, sed plerumque paulo major et squamulis subpallidioribus nebulosus, antennis sensim longioribus et (præsertim in scapo) gracilioribus.

*Var. β serresetosa.* Elytris paulo evidentius setulis subpallidioribus seriatis obsitis. [*Ins. Palma*]—Long corp. lin.  $2\frac{1}{2}$ —vix 3.

*Habitat* in intermediis Teneriffæ et Palmæ, *var. β* ad hanc solam pertinente.

So very closely does the present *Lichenophagus* resemble the *L. tessellata* that until lately I had regarded it as a variety of that insect, nevertheless, after a careful examination of a very extensive series of them both, I find that (however slightly so) the antennæ of the *L. persimilis* are so *invariably* longer than those of its ally, and with their scape so conspicuously slenderer, that I cannot but believe it to be specifically distinct, and more particularly so since it is not confined to merely a single district, or even island (which would probably be the case were it but a phasis of the other), but is found equally in both Teneriffe and Palma. In minor respects it is, *on the average*, a trifle larger and paler than the *tessellata*, and the Palman examples have the longitudinal rows of short setæ with which the elytra are beset somewhat longer and paler (and therefore more perceptible).

I took the *L. persimilis* in profusion, during May of 1859, from beneath stones, in the Barranco at Ycod el Alto, in Teneriffe—immediately above the bridge, and I also met with the *var*  $\beta$ , though more sparingly, in the Barranco above S<sup>ta</sup> Cruz, of Palma, early in June of the preceding year.

#### 564 *Lichenophagus subnodosus*, n. sp.

*L. species* a *L. persimilis* haud valde remota, sed prothorace magis cylindrico (i. e. ad latera paulo minus rotundato), elytris setis longioribus crassius robustissimis parce obsitis, interstitiis plus minus elevatis interruptis nodos plus minus distinctos efficientibus, antennarum scapo ad basin sensim graciliore.

*Variat* squamulis vel fusco-, vel (rarus) etiam submetallico-fusco-cinereis, vel (sæpius) omnino brunneis.

*Var.*  $\beta$  *subcalva*. Elytrorum setis brevioribus [*Ins Hierro*].—Long corp. lin.  $2\frac{1}{2}$ –3.

*Habitat* Teneriffam sylvaticam, in intermediis degens *var*  $\beta$  ad insulam Hierro solam pertinet.

The present *Lichenophagus* seems to occur, on the average, at a rather higher elevation than the last one, and to attain its maximum within the sylvan districts of intermediate altitudes. It will probably be found to be universal throughout the central and western portions of the Group, though hitherto I have observed it only in Teneriffe and Hierro. It may be known by its elytra being sparingly studded with rather elongate and very robust (often indeed almost subelavate) setæ, and in having their interstices more or less raised and interrupted, so as to form (greater or less) nodules—in both of which respects it agrees with the *L. impressicollis*, though that insect has those characters not only much exaggerated, but also, apart from the sexual peculiarities of its tibiae, others in addition. In the colour of its scales it is extremely variable, for although the generality of specimens are of a dull uniform brown, more highly developed ones, on the contrary, have often a fusco-cinereous (and occasionally even a yellowish, or slightly metallic) tinge—with sometimes the sutural and sometimes the lateral region paler than the rest of the surface. The only individuals which I have yet seen from Hierro (five in number, and which were captured by myself on the hills immediately outside the town of Valverde) have their bristles considerably shorter than is the case in the Teneriffan ones, but I can perceive nothing about them to warrant the suspicion that they are specifically distinct. I have not been able to detect any appreciable difference in the tibiae of its two sexes.

The *L. subnodosus* is widely spread over the wooded districts of Teneriffe. I have taken it on the laurel-clad mountains above Taganana, at Las Mercedes, La Esperanza, the Agua Garcia, and the Agua Mansa.

565 *Lichenophagus sculptipennis*, n. sp.

*L. species* inter *L. subnodosum* et *impressicollum* aliquo modo sita sed (nisi fallor) vere distincta, præsertim elytris multo grossius sculpturatis (punctis striarum maximis, inter se fere subconfluentibus quasi arcte adpressis) bene dignoscitur. Forma generali et colore, fronte minus profunde excavata, prothorace æquali necnon elytrorum setis haud longissimis cum illo congruit, sed antennis rostroque sublongioribus, sculpturâ omnino grossiore et nodis elevationibus differt.

*Var. β* [an species distincta?—forsan *L. subnodosi* mea varietas] Minor, elytris paulo minus profunde sculpturatis.—Long. corp. lin. (*var. β* excepta) 2<sup>2</sup>—3.

*Habitat* Palmam, in intermediis (præsertim sylvaticis) ramor.

In certain respects the present *Lichenophagus* is intermediate between the *L. subnodosus* and *impressicollis*, nevertheless, apart from minor distinctions, the enormous size of its elytral punctures, which are consequently (even whilst somewhat fewer in number) more closely packed together, will serve, *primâ facie*, to separate it from them both. In the majority of its details, however (as, for instance, its general outline and hue, its less deeply excavated forehead, its unimpressed prothorax and its shorter setæ), it agrees better with the former of those species than it does with the latter, yet its very much coarser sculpture, in conjunction with its just perceptibly longer antennæ and rostrum and its more developed nodes, would seem to imply that it cannot be referred to it. But what I have regarded as the "*var. β*" I am more doubtful about, being far from sure that at any rate the few specimens of it which I have examined are more than the exponents of a mere insular state of the *subnodosus*—from which they seem mainly to differ in the rather more coarsely punctured striæ of their elytra. Until, however, further material has been obtained, I prefer keeping them in their present position—though their smaller size and less deeply sculptured surface do apparently tend to remove them from their assumed type.

The *L. sculptipennis* (both in its normal state and the "*var. β*") I have met with hitherto only in the intermediate elevations of Palma—in which island I captured it sparingly, during June of 1858, in the Barranco above St<sup>a</sup> Cruz, as well as in the laurel-woods on the ascent to the Cumbre above Buenavista.

566 *Lichenophagus impressicollis*, n. sp.

*L.* species *L. subnodoso* et *sculptipenni* affinitate proxima, sed plerumque paulo major, nigrescentior, elytris quadrationibus, multo magis nodosis setisque multo longioribus obsitis, rostrum et fronte valde profunde excavato-concavis, prothorace basi sensim angustato, profundius punctato, conspicue inæquali (sc. in disco late longeque impresso necnon utrinque foveâ mediâ laterali subrotundatâ obscuriore notato)

*Variat* elytris ad humeros necnon in fasciâ postmediâ valde fiactâ plus minus obsoletâ niveo-squamosis

*Mas* tibus anticis intus minutissime serratis necnon ante apicem sat distincte subexcavato-sinuatis

*Fem* tibus anticis sensim latoribus, intus glabris rufo-ferrugineis simplicibus et ante apicem minus (tamen evidenter) subexcavato-sinuatis — Long. corp. lin.  $2\frac{1}{2}$ —3

*Habitat* Teneriffam sylvaticam, in lauretis ad Las Mercedes et supra Tagananam haud infrequens

This is the only *Lichenophagus* in which I have been able to detect any sexual modifications (at all appreciable) in the anterior tibiæ. Even in this one indeed the characters, however decided, are rather small, nevertheless, when carefully inspected, it will be seen that the males have their front tibiæ very minutely serrated internally, and rather conspicuously sinuated (or subemarginate) before the apex, whereas in the opposite sex the tibiæ are not only a trifle broader and less evidently scooped out, but likewise with their inner surface *glabrous*, rufo-ferruginous, and shining, and perfectly simple along the edge. But, apart from this sexual peculiarity, the *L. impressicollis* is well distinguished by its somewhat dark surface (which in fresh and highly coloured examples is often ornamented with a few small dashes of snowy-white scales—particularly at the shoulders and across the hinder disc of the elytra, in which latter position they occasionally assume the form of a broken, transverse fascia), by its forehead (or perhaps, more properly, the base of its rostrum) being *very* widely and deeply concave, by its prothorax (which is perceptibly narrowed at the base and most coarsely punctured) being *uneven* (that is, with a broad but rather shallow impression along the fore disc, which is gradually contracted posteriorly, as well as with an obscurer and rounded one on either side about the middle), and by its elytra being comparatively square, considerably wider at the shoulders than the prothorax, with their nodes greatly developed and sparingly beset with extremely elongate setæ. It is, on the average, a trifle larger than any of the *Lichenophagi* as yet detected.

The *L. impressicollis* is eminently a sylvan insect. Indeed hitherto

I have observed it only in the laurel-forests on the north-eastern mountains of Teneriffe—at Las Mercedes, Taganana, and towards Point Anaga—where (like the *Taiphu*) it occurs beneath stones and pieces of rotten wood in damp, shady spots

(Subfam BRACHYDERIDES)\*

Genus 216 HERPYSTICUS

Germai, *Ins Spec* 1: 413 (1824)

The genus *Herpysticus* (which seems to be peculiarly Canarian) is remarkable for the large and apterous insects which compose it, and which reside under stones in the most dry and barren places,—the only instance in which I have ever observed them elsewhere being on one occasion, at the Banda, in Palma, where they were tolerably common on the flowers of the *Opuntia tuna*, or Prickly Pear. Their antennæ are exceedingly short, and the funiculus appears at first sight to be only 6-articulate, but this merely arises from the fact of

\* I may insert here, as its probable right location a reputed Teneriffan weevil, the original type of which has been lent me by M. Chevrolat (in whose collection it exists)—the *Cimiculus cribrarius* of Olivier. Schonher, who (by his own admission) never examined it at all, followed Dejean and placed it in *Geonemus*—to which, however, it clearly does *not* belong, and I think it is far more likely that M. Jekel's conjecture is nearer the truth, that it should be assigned to the South-African genus *Catamonus* [Schon, *Mant Curc* 422]. It does not, however, accord precisely with the published *diagnosis* even of *Catamonus*, nevertheless in the absence of a type to judge from, I am content to cede it to that group provisionally,—the following short description being sufficient, I think, to determine at any rate the *species* (with which more particularly I am now concerned). Although recorded by Olivier as a Teneriffan insect, I do not apologize for refusing it a place in this Catalogue *except in a foot-note*, because I suspect that some mistake may have arisen as to the country from whence it was obtained, and I am loth to admit anything into the body of the work which rests upon doubtful evidence. Considering the enormous mass of Canarian material which has passed under my eye I am at least in a position to offer an opinion as to the *probability*, or otherwise, of its supposed *habitat* being correct, and I am bound to add that it recedes so entirely from all the *Rhynchophorinus* types which I have yet seen from these islands, that I cannot but believe that it must have been erroneously referred to them.

*Catamonus* ? *cribrarius*

*C. elongato-ovatus*, squamulis submetallico-fuscis et submetallico-cinereis densissime tectus, rostro longiusculo, obsolete tricarinato, apice subdilatato, oculis oblongis, demissis, prothorace parvo, subtriangulari, rugoso-punctato, angulis posticis subrectis obsolete canaliculato, elytris profunde punctato-striatis apice singulatim acummatas sed haud divaricatis, singulis intra apicem subgibbosis, puncto discali medio albedo ornatis necnon ad marginem obsolete subalbido-irroratis interstitiis alternis obsoleteis subelevatis, antennis pedibusque longiusculis, subgracilibus.—Long corp. lin 6

*Cimiculus cribrarius*, *Oliv*, *Ent* v 83 343 tab 24 f 344 (1807)

*Geonemus cribrarius* *Dej*, *Cat* (edit 3) 254 (1837)

—, *Schon*, *Gen et Spec Curc* vi 214 (1842)

*Habitat* 'in Teneriffa' (sec cl Olivier), mihi non obviis, forsan ex Africa australi deportatus

the seventh joint being much enlarged, and so closely applied to the club that it seems to (and in fact, in some measure, does) form a portion of it. Their tibiae are minutely serrated along their inner edge, and their prothoraces are rather uneven, having a tendency (more or less expressed in the several races and species) to be branded with a transverse irregular fovea, or flexuose line, on either side in the middle, and two small rounded impressions (which are often nearly obsolete, and always a good deal concealed beneath the minute, hardened, granuliform scales with which the surface is covered) on each side of the central line on the disc. I have constantly captured them *in coitu*, but after a most careful comparison of the two sexes, I can detect no external differences between them, either in outline or structure, unless it be that the males are occasionally just perceptibly narrower and with their legs a trifle more robust.

The *Herpystici* are essentially variable, both in stature and clothing, assuming slightly different phases according to the region which they inhabit, but which pass so imperceptibly into each other (however opposite in the two extremes) that it is impossible to regard any of them as of specific importance. Thus, what I have treated as the type of the *H. eremita* (mainly from the fact of the insect having been originally described from an individual of that particular state), although sometimes small, ascends to a large size and has its elytra usually entirely free from erect hairs—with the exception of a very few towards their apex. This is the form which seems to obtain (subject to trifling modifications) throughout Teneriffe, Gomera, and Palma. But in certain districts of Grand Canary the examples have the additional pile not confined merely to the apex, but more or less developed over the entire surface of the elytra,—the hairs being sometimes short, decumbent, and but faintly traceable (at any rate anteriorly), sometimes considerably longer and more erect, whilst at others they are exceedingly elongated, fine, and thickly set together. Nevertheless I have observed so many instances in which this development of the pubescence is unmistakably a mere topographical character and not a specific one—as in the *Protes inconstans* of the *Ptinidae*, and the *Sitones latipennis* of the present family—that I do not consider it so significant as it might at first sight appear to be.

§ I. *Funiculi articuli primus et secundus inter se longitudine sub-  
aequales (1 e secundo primo vel longiore)*

#### 567 *Herpysticus eremita*

*H. elongatus, niger, squamis minutis duris granuliformibus (vel fusco-*

cinereis vel submetallico-fuscis) nebulosus, capite prothoraceque leviter rugose subpunctatis, rostro longitudinaliter canaliculato, hâc subinæquali (utrinque forvâ irregulari transversâ mediâ laterali necnon punctis duobus sæpe obsoletis juxta canaliculam discalem impresso), mox intra apicem anguste constricto, elytris elongato-ovatis, striato-punctatis, antennis brevibus, pedibus elongatis, crassis

- $\alpha$  (*status typicus*) Elytris sat profunde striato-punctatis, pilis erectis (etiam versus apicem) fere caentibus  
 $\beta$  *subvestita* Elytris, præsertim postice, pilis erectis mollibus sed haud dense obsitis  
 $\gamma$  *lanata* Paulo magis rugulosa squamisque pallidioribus vestita, elytris pilis erectis mollibus elongatis cinereis densissime obsitis et minus profunde striato-punctatis—Long corp lin 5-8

Curculio eremita, *Oliv*, *Ent* v 85 321 tab 24 f 383 (1807)

Herpysticus læscollis, *Ger m*, *Ins Spec* 1 413 tab 2 f 3 (1824)

—, *Schon*, *Gen et Spec Curc* 1 556 (1833)

— eremita, *Bulle*, in *Webb et Berth* (Col) 72 (1838)

*Habitat* Canariam, Teneriffam, Gomeram et Palmam, sub lapidibus in aridis degens

With the exception of the typical one (or that from which the insect was originally described), I have given names to the states indicated above of this variable Curculionid, in case that either the  $\beta$  or  $\gamma$  should prove eventually to be specifically distinct. My belief, however, is, as before expressed, that they cannot be so regarded, for I think that I am able to complete the passages between the whole of them, and that it is impossible therefore to look upon them as more than topographical varieties—brought about by surrounding circumstances and the more or less calcareous nature of the regions in which they occur. Indeed the *tendency* which many insects possess of having their clothing more developed in sandy and calcareous districts than elsewhere I have more than once had occasion to comment upon, though for what purpose they should be thus additionally pubescent I am quite unable to conjecture. Certainly, however, it appears to be a fact,—no less than that *scaly* species are apt to have their scales perceptibly whiter, or more cinereous, in such localities.

In accordance with the above remarks, it appears to me that this unstable insect is, on the average, rather darker and larger in the more western islands of the Group—Teneriffe, Gomera, and Palma (and doubtless Hierro also, though I did not happen to meet with it there)—than it is in Grand Canary,—and that its elytra are usually almost entirely free from additional erect hairs, with the exception of a very few towards their apex. It was from a Teneriffan specimen that it was originally described—as I am able to vouch for cer-

tain, since M. Chevrolat has kindly communicated to me an Olivierian *type* from his collection. In Grand Canary, however, the examples show a more evident *tendency* to become pubescent,—even the comparatively bald ones being seldom free from traces of a slight additional pile, whilst some (as those from the aid neighbourhood of Las Palmas) have the hairs much more developed, and others (as is the case in the sandy region of Maspalomas, in the extreme south of the island) are excessively pilose and of a paler hue—being densely beset with very fine, woolly, elongate cinereous hairs. These last I have indicated as the “ $\gamma$  *lanata*” Assuming therefore that I am correct in regarding these states as conspecific with each other, the *H. eremita* may be said to be universal throughout the low and intermediate elevations of (at all events) Grand Canary, Teneriffe, Gomera, and Palma—in each of which I have taken it, more or less abundantly. From Teneriffe it has likewise been communicated by the Barão do Castello de Paiva, where, as well as in Gomera, it was captured by Dr. Crotch.

§ II *Funiculi articulus secundus primo distincte longior*

568 *Herpysticus calvus*, n. sp.

*H. præcedenti similis sed paulo minor, capite prothoraceque minus sculpturatis, illo sæpius canaliculâ longiore impresso et plagâ parvâ obscurâ frontali albidiorè distinctius ornato, oculis paulo magis prominentibus, hoc minus inæquali, clytüs vix magis ovatis, plus minus brunneo-subtessellatis, feic calvis, profunde striato-punctatis, interstitiis minus rugulosis, antennis pedibusque paulo gracilioribus et sæpius minus pilosis*—Long corp. ln  $4\frac{1}{2}$ –6

*Herpysticus eremita*, *Hawting* [nec *Ohw.*], *Geolog. Verh. Lenz und Fuert* 141 & 142

*Habitat* in Lanzarota et Fuerteventura, sub lapidibus, passim

After allowing so wide a range for variation in the *H. eremita*, it may perhaps appear inconsistent, *primâ facie*, that I should regard the present insect as distinct from it, nevertheless, not to mention its many other features, I believe that the fact of the second joint of its funiculus being so much more evidently longer than the basal one is a *structural* character which would of itself suffice to establish its specific claims. Apart from this, however, it has many peculiarities essentially its own. Thus, it is on the average a trifle smaller than the *eremita*, its head and prothorax (when deprived of their scales) are less sculptured, and the former of these has the rostral channel usually somewhat longer, the eyes more prominent, and (in unrubbed specimens) a more decided (though small) paler frontal patch, whilst

the latter is less *uneven* (or with the inequalities shallower), its elytra are generally more ovate (or a little rounder behind the middle), perfectly free from erect pile, and with the interstices less rugulose, and its antennæ and legs are both slenderer and less hairy

In addition to the above particulars, the *H calvus* seems to be restricted to Lanzarote and Fuerteventura, where it takes the place of the *eremita* which is so universal throughout the remainder of the archipelago. In the latter of those islands it was found also by Mr Gray, and examples have likewise been communicated from them by the Barão do Castello de Paiva. That it is the species which M Hartung registers as the "*H eremita*, Oliv" there can be no doubt, for I have received one of his specimens, thus named, from Dr Heer who compiled the Catalogue

#### 569 *Herpysticus oculatus*, n sp

*H calvo* similis, sed paulo minor squamisque albidioribus tectus, oculis subminoribus, multo magis prominentibus, prothorace variolis profundis parce impresso, elytris pilis brevibus albicantibus subdemissis distinctius obsitis, antennis (paulo brevioribus et picescentioribus) pedibusque vix gracilioribus ac paulo magis pilosis — Long corp lin 4-5

*Habitat* in calcariis intermediis Lanzarotæ, rarior

Although very closely allied to the preceding one, the present *Herpysticus* must, I think, be regarded as distinct. It appears to be, on the average, a trifle smaller than the *calvus*, and altogether whiter or more cinereous, its eyes are somewhat rounder and very much more prominent, its prothorax, when deprived of its scales, will be seen to be pitted with large and deep varioles, its elytra are rather more evidently beset with a short, silvery, subdecumbent pile, and its limbs are perhaps a trifle slenderer,—the antennæ being, also perceptibly shorter and more picescent, whilst the legs are rather more hairy. Hitherto I have observed it only in calcareous districts of Lanzarote, but it will probably occur in Fuerteventura likewise. My specimens were taken, on the 22nd of January 1858, from beneath stones, on the arid hills between Hama and San Miguel de Teguse, and I have a single Lanzarotan example which was captured by M Hartung

#### Genus 217 **THYLACITES.**

Germar, *Ins Spec* 1 410 (1824)

The only member of this genus which I have detected hitherto at the Canaries belongs to a small and rounded type which has much the appearance, *prima facie*, of a *Cneorhinus*, and which further re-

cedes from the ordinary *Thylacites* in having its funiculus-joints free from rigid setæ, its prothorax comparatively narrow and cylindric, and its third tarsal joint very much less expanded or bilobed. From the *Cneorhina*, however, it may immediately be known by, *inter alia*, its rostrum being less deeply excavated at the tip, by its scutellum not being visible, and by its surface being studded with long and erect hairs. Its legs also are slenderer than is the case in the representatives of that group,—the tibiæ, particularly however the anterior ones, being (although *more* evidently fringed with minute spinules) less dilated at their extreme apices.

#### 570 *Thylacites obesulus*, n. sp.

*T.* densissime albido-squamosus et pilis longissimis suberectis mollibus parce obsitus, capite prothoraceque vix subochraceo-tinctis, hoc angusto, subcylindrico, mox ante basin transversum constricto, longitudinaliter vix sublineato-maculato, elytris valde convexis, rotundato-subquadratis, irregulariter nigro-maculatis, maculis valde irregularibus plus minus confluentibus et versus suturam longitudinaliter dispositis, antennis pedibusque rufo-ferrugineis, illis subcalvis, his albo-squamosis, tarsorum articulo tertio vix dilatato.—Long corp. lin  $2\frac{1}{2}$

*Habitat* Lanzarotam, in aridis maritimis arenosis prope oppidum Arrecife, mense April. a. d. 1859, exemplar unicum cepi.

A single specimen only of this very distinct *Thylacites* has hitherto come beneath my notice. It was captured, during April 1859, at the roots of sand-plants, on a sandy slope behind the sea-beach of Lanzarote, about a mile to the south of Arrecife.

#### Genus 218 SITONES.

Germai, *Ins. Spec.* 1 414 (1824)

#### 571 *Sitones gressorius*.

*Curculio gressorius*, *Fab.*, *Ent. Syst.* 1 11 465 (1792)

*Sitones gressorius*, *Schön.*, *Gen. et Spec. Curc.* 11 97 (1834)

*Sitona gressoria*, *Brullé*, in *Webb et Berth.* (Col.) 72 (1838)

———, *Woll.*, *Ins. Mad.* 403 (1854)

———, *Id.*, *Cat. Mad. Col.* 119 (1857)

*Habitat* in Teneriffa, Gomera, Palma et Hierro, super folia *Lupinus termis* Forsk. hinc inde sat abundans.

As in Madeira, the *S. gressorius* of Mediterranean latitudes appears to be attached in these islands to the Lupines (*Lupinus termis*, Forsk.), which are often cultivated at intermediate elevations. Under such circumstances I have captured it near Las Mercedes and about Orotava in Teneriffe, in the Barranco above Sta Cruz of Palma,

and near Valverde in Hierro—in the last of which islands, as well as in Gomera, it was found likewise by Mr Gray. In Teneriffe it was met with also by Dr Crotch, who informs me that it is called “San Pedro” by the inhabitants.

### 572 *Sitones latipennis*.

*Sitones latipennis*, *Schon*, *Gen et Spec Curc* 1199 (1834)

*Sitona verrucosa* \*, *Brulle*, in *Webb et Beith* (Col) 72 (1838)

— *latipennis*, *Woll*, *Ins Mad* 404 (1854)

— —, *Id*, *Cat Mad Col* 119 (1857)

*Habitat* in intermedis Canariæ et Teneriffæ, ad folia *Genistæ* degens

This insect, which is common on the *Genista scoparia* in Madeira, occurs likewise, though less abundantly, at the Canaries—where it is found on the same shrub, as also on the Spanish Broom, at intermediate elevations. I have taken it on the hills at Osoño in Grand Canary, and outside the wood of Las Mercedes in Teneriffe. The specimens from these islands differ from the Madeiran ones in being rather more densely and *whitely* scaly, and in the pile with which their elytra are additionally studded being both longer and much more erect. I am satisfied, however, that this peculiarity of their clothing is merely a geographical one, and does not indicate a separate, closely allied, species, for although the *generality* of the Canarian examples are furnished on their elytra with these erect elongate hairs, still the length of the pubescence *varies considerably* (even in the same locality), so that in some individuals it is as short as in those from Madeira. Moreover I have already shown, in several instances, how variable a character the pilosity is apt to become, under particular circumstances—as in the case of the *Ptotes inconstans* of the *Ptinidæ*, and as in the genus *Heipystius* (already noticed) of the present family. I conclude therefore that, all other particulars being the same, this *tendency* of the pubescence to be more developed in the Canaries than at Madeira is a fact of some local interest but without any specific signification.

### 573 *Sitones punctiger*

*S. oblongus*, *niger*, squamis griseis et cinereis variegatus setisque piliformibus demissis obsitus, capite prothoraceque profunde rugoso-

\* I have little doubt that Mr Brulle's *S. verrucosa* was established on a small example of this variable insect. At any rate the few and unimportant particulars to which he calls attention are, *all* of them, those which belong to the *S. latipennis*, except the one in which he says ‘le troisième intervalle des stries est petit de sa nature et un peu plus élevé que les autres’ but since the whole of his descriptions which I have yet had an opportunity of testing are wanting in accuracy, I am not disposed to lay much stress upon this character.

punctatis, illo postice punctis duobus cinereis ornato oculis oblongo-rotundatis valde prominentibus, hoc ad latera pallidiorie rotundato, linea mediâ et punctis 2 vel 3 utrinque annexis pallidioribus ornato, elytris cylindricis, per suturam obscure albidis, interstitiis alternis lacte fulvo nigroque tessellatis, antennis ad basin pedibusque (squamosis) claviolibus—Long corp lin  $2\frac{1}{2}$ -3

*Sitones punctiger*, *Woll, Ann Nat Hist* vi 220 (1863)

*Habitat* Lanzarotam et Fuerteventuram, sub lapidibus in aridis arenosis et calcariis degens

This large *Sitones* is at once remarkable for its deeply sculptured, rounded prothorax (which, in addition to a few scattered and sometimes obsolete ones, has two or three small cinereous punctiform spots on either side of its paler central line), for its cylindric, prettily tessellated elytra (the suture of which is of a more or less obscure chalky white), for its extremely prominent eyes, and for the two subapproximated cinereous specks (similar to those on the prothorax) with which the hinder portion of its head is ornamented. It appears to be very rare (or, at all events, extremely local), and confined to the two eastern islands of Lanzarote and Fuerteventura—in the former of which I took it, not uncommonly, during March and April of 1859, from beneath stones, in the flat sandy district to the south of (and adjoining) Arrecife, whilst, in the latter, I met with it, though more sparingly, a few weeks later, on the calcareous hill immediately outside the little town of Sta Maria Betancuria

#### 574 *Sitones cambricus*

*Sitona cambuca* (*Kby*), *Steph, Ill Brit Ent* iv 140 (1831)

*Sitones cribicollis*, *Schon, Gen et Spec Curc* ii 101 (1834)

*Sitona cambuca*, *Woll, Ins Mad* 405 (1854)

— —, *Id, Cat Mad Col* 120 (1857)

*Habitat* in Canaria et Teneriffa, rarior

The European *S. cambricus*, which is common in the east of Madeira and in Porto Santo, is decidedly scarce in these islands—where hitherto I have met with it only in Grand Canary and Teneriffe. In the latter, however, it is widely spread, my specimens being from the vicinity of Orotava, the mountains above Sta Cruz, the Agua Garcia, and the Agua Mansa

#### 575 *Sitones lineatus*

*Cuculio lineatus*, *Linn, Fna Suec* 183 (1761)

*Sitones lineatus*, *Schon, Gen et Spec Curc* ii 109 (1834)

*Sitona lineata*, *Woll, Ins Mad* 406 (1854)

— —, *Id, Cat Mad Col* 120 (1857)

*Habitat* Canariam, Teneriffam et Palmam, præcipue in cultis degens.

This common insect, which is universal throughout Europe, and which occurs also in Madeira, and is recorded by M Morelet at the Azores, is by no means abundant at the Canaries—where (as in Madeira) it may very probably have been introduced from more northern latitudes. I have, however, taken it about Las Palmas in Grand Canary, around Orotava, &c in Teneriffe, and in Palma. From Teneriffe it has likewise been communicated by Dr Clotch and the Barão do Castello de Paiva\*.

### 576 *Sitones humeralis*

*Sitona humeralis* (Kby), *Steph*, *Ill Brit Ent* iv 138 (1831)

*Sitones promptus*, *Schon*, *Gen et Spec Curc* ii 113 (1834)

*Sitona humeralis*, *Woll*, *Ins Mad* 407 (1854)

— —, *Id*, *Cat Mad Col* 120 (1857)

*Habitat* ins omnes Canarienses, passim, præsertim in aridis calcareis

\* Evidently akin to the *S lineatus* is a reputed Teneriffan species, which I would briefly describe as follows —

### *Sitones setuliferus*

*S oblongus*, nigri, squamis cinereo-albidis densissime tectus setulisque brevissimis adspersus, capite prothoraceque ad latera obsolete subochraceo-tinctis illo oculis oblongo-rotundatis, hoc lineâ mediâ albidiorè ornato elytris leviter punctato-striatis, interstitio quarto per discum posticum ochraceo-tincto, pedibus claviculis, albo-squamosis — Long corp lin 2½

*Sitones setuliferus*, *Schon*, *Gen et Spec Curc* vi 273 (1840)

*Habitat* (sec Dom Chevrolat) in Teneriffa mihi non obviis

The above diagnosis has been compiled from a unique specimen which M Chevrolat has been kind enough to lend me, and which is the actual type described in Schonher's work. It is somewhat singular that I have met with no other example of the species either amongst the enormous amount of material amassed by myself in these islands or in the smaller collections formed by others, and I cannot but feel a little doubtful, therefore, whether some mistake may not have arisen as to its *habitat*—more particularly since another Curculionid, likewise registered as Teneriffan from the collection of M Chevrolat, namely the *Catamonus cribrarius* and which is so large and conspicuous that it seems scarcely possible that it should have escaped our combined observations (and which I may further add, has nothing in common with any of the known Canarian types), is in exactly the same predicament. My impression is that both of them may have come from some other country, and may perhaps have been accidentally mixed up afterwards with insects from Teneriffe. Nevertheless since their published *habitat* cannot be disallowed until the species have been redetected elsewhere, and since it is of course possible that they may, after all, be truly Canarian, I have thought it desirable to include their diagnoses, at any rate as foot-notes, in this Catalogue though I cannot without further evidence admit them into the body of the work.

Judging from the specimen before me, the *S setuliferus* is of about the size of the common *lineatus*, but is much more densely clothed with robust cinereous-white scales, and closely besprinkled with coarser, but very abbreviated, setæ, its eyes are a trifle smaller and less rounded, its prothorax has a most distinct white line down the centre, and its elytra are scarcely ornamented with longitudinal lines. Then third interstice, however, is curiously (though obscurely) ochraceous down the hinder disc of each elytron—a colour which is likewise faintly expressed about the shoulders, as also along either side of the head and prothorax. Altogether it appears to me as though it might be a 'small' and rather highly-coloured variety of a species which I have received from Dr Schaum under the name of *S. atheniensis*, though, with only a solitary example (of both) to judge from, it is of course impossible to say thus for certain.

The European *S humeralis*, which is scattered sparingly over the Madeiran Group, is *universal*, though by no means common, at the Canaries—in the whole seven islands of which I have myself captured it. In Palma it was likewise found by Mr Gray, and from Teneriffe it has been communicated by Dr Crotch and the Barão do Castello de Paiva. It occurs more particularly in dry, calcareous spots.

### 577 *Sitones setiger*

*S* oblongus, nigri, squamis griseis inæqualiter vestitus, capite prothoracque densissime et profunde rugoso-punctatis, illo oculis oblongo-rotundatis prominentibus, hoc subcylindrico, intra apicem (subelevatum) constricto, ad utrumque latus lineâ paulo albidiorè ornato, elytris profunde punctato-striatis, vel obscure variegatis (interstitiis alternis obsolete tessellatis) vel dense fusco aut ochraceo-fusco squamosis, sæpius versus latera squamis albidioribus obscure plagiatis, interstitiis setosis (setis nigrescentibus sed in interstitiis alternis setis albidioribus distantibus commixtis), antennis (brevibus) pedibusque rufo-ferrugineis, capitulo femoribusque obscurioribus—Long corp. lin  $1\frac{1}{2}$ —2

*Sitones setiger*, Woll, *Ann Nat Hist* xi 221 (1863)

*Habitat* in aridis insularum Canariensium, in Palma solâ hactenus haud detectus

Judging from the diagnosis, this little *Sitones* is probably allied to the *S senesetosus*, Schon, from Egypt. Unless, however, the published description of that insect is so inaccurate as to be absolutely worthless, the two species cannot possibly be identical, for the prothorax of the *senesetosus* is said to be *remotely* and *lightly* punctured, and with two *approximated* paler lines down its disc, whereas that of the *setiger* is most densely and coarsely so, with the longitudinal lines extremely wide apart (being in fact completely lateral), then, its elytra are described as “*tenuissime punctato-striata*” and with the interstices alutaceous, whereas in the Canarian insect they are deeply punctate-striated, and the interstices (which are shining) have not the slightest tendency to be alutaceous, and, lastly, the eyes of the Egyptian species are stated to be round, whereas (although a little variable in outline) they are never quite round in the *setiger*, being more frequently oblong.

There can be little doubt that the *S setiger* is universal throughout the archipelago, though it does not happen to have been observed in Palma, but in Lanzarote, Fuerteventura, Grand Canary, Teneriffe, and Hierro I have taken it, more or less abundantly, and in Gomera it was captured by Dr Crotch (who also met with it in Grand Canary and Teneriffe). In Lanzarote, Fuerteventura, and Teneriffe it was

found likewise by Mr Gray. It occurs principally in dry spots at low and intermediate elevations—often abounding around Sta Cruz and Orotava in Teneriffe, as also near Las Palmas and throughout the region of El Monte in Grand Canary.

Genus 219 **BRACHYDERES.**

Schönherr, *Circ Disp Meth* 102 (1826)

578 **Brachyderes rugatus**, n. sp.

*B. elongatus*, niger, nitidus, pube subcinerea demissa parce tectus, capite prothoraceque punctatis hinc in disco obsolete canaliculato et ibidem levius punctato, elytris ellipticis, levissime substriato-punctatis, interstitiis minutissime subasperato-punctulatis et transversim rugulosis, antennis pedibusque rufo-piceis.

*Mas* elytris angustis, vix profundius striato-punctatis, apice obtuse rotundatis.

*Fœm* elytris multo latoribus, apice lateraliter subcompressis acutiusculis—Long corp. lin.  $4\frac{1}{2}$ –6.

*Habitat* Palmam, super folia floresque *Pinus canariensis* in elevatis degens.

Both of the *Brachyderes* here described are attached to the foliage and flowers of the *Pinus canariensis*, at lofty altitudes, and although they are certainly very closely related *inter se*, I can hardly suppose them to be insular modifications of the same species. The *B. rugatus* abounds in the old Pinals of Palma—where I observed it in considerable numbers, during June 1858, in that extensive one which clothes the region from the elevated plains known as ‘Los Llanos’ up to the edges of the great Caldera. It is, on the average, a trifle larger than the *sculpturatus*, and is more thickly beset with a somewhat paler and more decumbent pile, and its elytra are much more finely punctate-striated, with their interstices rather more densely transversely-rugulose.

579 **Brachyderes sculpturatus**, n. sp.

*B. præcedenti* similis, sed vix minor, pube paulo magis robustâ et erectâ parcius obsitus (pube præsertim ad apicem necnon per suturam sæpius submetallicâ), elytris in utroque sexu multo profundius striato-punctatis, interstitiis minus dense transversim-rugulosis, in sexu fœmineo ad apicem ipsissimum vix minus acutis—Long corp. lin.  $4\frac{1}{2}$ .

*Habitat* in locis similibus ac præcedens, sed in montibus Canariæ et Teneriffæ (nec Palmæ).

Whilst the last species occurs in the ancient Pinals of Palma, the present one I have observed in those of Grand Canary and Teneriffe.

—where it is found in similar spots at a high altitude. On the lofty mountains of the former, above San Bartolomé, in the district of Tarajana, I brushed it, not uncommonly, during April 1858, from off the foliage of the gigantic pine-trees which clothe those elevated slopes, and a month later I met with it in the great Pinal above Yeod de los Vinhos of Tenerife. It differs from the *B. rugatus* in being perhaps a trifle smaller, in the pubescence with which it is beset being more sparing, but nevertheless a little robust and more erect, as well as (at any rate posteriorly and along the suture) of a more decidedly metallic tinge, and in its elytra (which are just perceptibly less acute at their extreme apex) being much more deeply punctate-striated, though with their interstices a little less closely rugulose.

## Fam. 46. BRUCHIDÆ.

### Genus 220 BRUCHUS

Geoffroy, *Ins. de Paris*, 1 163 (1762).

#### 580 *Bruchus pisi*

*Bruchus pisi*, Linn., *Syst. Nat.* 1 11 604 (1767)

— —, *Schön., Gen. et Spec. Curc.* 1 57 (1833)

— Fabæ?, *Bridle, in Webb et Berth. (Col.)* 71 (1838)

— *pisi*, *Lucas, Col. de l'Algérie*, 401 (1849)

*Habitat* insulas omnes Canarienses, in cultis et granariis vulgaris.

The European *B. pisi* (which occurs sparingly in Madeira) is universal at the Canaries, in the whole seven islands of which, except Gomera, I have myself captured it, and in Gomera it was taken, during the spring of 1862, by Di Ciotch. In Palma and Hierro it was found likewise by Mr Gray, and from Tenerife it has been communicated by the Barão do Castello de Paiva. It is closely allied, at first sight, to the *B. rufimanus*, though, when carefully inspected, it will be seen to be abundantly distinct. Thus, apart from minor characters, it is not only, on the average, a trifle larger and more oblong (seldom, if ever, descending to so small a size as certain examples of that insect), but its antennæ are a little shorter and thicker, its prothorax is somewhat broader, with the lateral angle more prominent and spiniform, its elytral interstices are rather more coarsely punctured, its pygidium (and indeed its entire surface) is more brightly variegated with black and white scales (the two black patches at the apex being larger and more conspicuous), its anterior pair of legs have their femora always darker than the (rufescent) tibiae and feet, whilst the intermediate tibiae are more or less rufo-ferruginous at their apex,

its hinder femora are armed beneath with a much longer and more powerful spine, and its third tarsal joint is perceptibly more expanded

### 581 *Bruchus rufimanus*.

*Bruchus rufimanus*, *Schön, Gen et Spec Cunc* 1 58 (1833)

———, *Woll, Ins Mad* 419 (1854)

———, *Id, Cat Mad Col* 123 (1857)

*Habitat* insulas omnes Canarienses, in eodem locis ac præcedens, vulgaris

This common European *Bruchus*, which occurs also in Madeira (and which has probably been imported into both Groups from more northern latitudes), is, like the *B. pisi*, universal at the Canaries, in the whole seven islands of which, except Gomera, I have myself captured it, whilst in Gomera it was found by Dr Clotch (who also met with it in Palma) In Lanzarote, Palma, and Hierro it was taken likewise by Mr Gray, and in Teneriffe by the Barão do Castello de Paiva and M Hartung As in the case of its ally, it abounds principally in houses, granaries, and about cultivated grounds

### 582 *Bruchus terminatus*, n sp

*B. fere rufimanum* simulans, sed paulo minus ovatus, antennis brevioribus, crassioribus, articulis inter se magis transversis, oculis sensim minus profunde excavatis prothorace ad latera argutius angulato, elytris oblongioribus, tibus anticis crassioribus, intermediis angustioribus rectioribus necnon ad angulum internum spinâ valde obtusâ subbifida terminatis, tarsis intermediis (ut pedibus anticis) læte rufo-testaceis —Long corp lin  $1\frac{3}{4}$

*Habitat* Teneriffam, in montibus supra Sanctam Crucem repertus

Two examples only of this *Bruchus*, captured by myself in Teneriffe (on the mountains above S<sup>ta</sup> Cruz), have as yet come beneath my notice The species is very closely allied to the *B. rufimanus*, for which at first sight it might be mistaken, nevertheless, judging from the individuals before me, it is a trifle smaller and more oblong, its antennæ are shorter and thicker, the subclaval joints being more transverse, the excavation of its eyes is not quite so deep (a structure which causes the eye itself to be slightly broader, or less scooped out), its prothorax is more angulated on either side in the centre, its pubescence is browner, its elytra are a little less ovate, its front tibiæ are thicker, its intermediate pair are slenderer and straighter, and are terminated at their inner apical angle by a robust, blunt, upwardly-directed, subbifid spine, or process (which is best seen when the insect is viewed with its abdomen foremost), and its middle feet are, like the whole anterior legs, of a bright rufo-testaceous hue

583 *Bruchus Teneriffæ*

*B. ovatus*, niger, subtus dense cinereo-, supra inæqualiter cinereo- et fusco-squamosus, antennarum basi pedibusque rufo-testaceis, femoribus (præsertim posticis, subtus denticulo minutissimo interdum ægre observando armatis) tibusque posticis basi nigris, capite prothoraceque subconico punctatis, elytris tenuiter subeicnato-striatis, antennis versus apicem vel rufo- vel nigro-brunneis

*Mas* clytris vix quadratoriis, antennis pedibusque (præsertim tibus tarsisque posterioribus) longioribus, tibus posticis sensim gracilioribus, exius minus evidenter subserratis, pygidio æqualiter cinereo-tomentoso (nec nigro-subbimaculato)—Long corp lin  $1\frac{1}{4}$ — $1\frac{1}{2}$

*Bruchus Teneriffæ* (*Steven*), *Schon*, *Gen et Spec Curc* v 105 (1839)

*Habitat* in montibus Canariæ, Teneriffæ et Palmæ, floribus *Spartii* et *Cytisi* gaudens

Were it not for the *habitat* “insula Teneriffa, in Spartio,” it would scarcely have been possible to recognize the present *Bruchus* in the long but inaccurate description given in the ‘Gen et Spec Curc’, but as it is, I feel perfectly satisfied that it is the species there referred to. It abounds in certain districts, chiefly of a high elevation, on the mountains of Grand Canary, Teneriffe, and Palma, and on the lofty Cumbre of Teneriffe, above Ycod el Alto and adjoining the Cañadas, as well as on the opposite Cumbre above the Agua Mansa, it absolutely teems—occurring on the flowers of the *Spartium nubi-gena* (or “Retama”), and being most common from about 7000 to 9000 feet above the sea. Nevertheless it is also found, though less profusely, at lower altitudes—thus, in Grand Canary I have taken it, from off the blossoms of *Cytisus proliferus*, throughout the region of El Monte, as well as on the mountain-slopes above San Mateo (towards the Roca del Soucilho), and on the ascent to the Pinal of Tarajana, above San Bartolomé. And whilst in Palma, during June 1858, I met with it in the great Pinal of the Banda above the plains known as “Los Llanos,” on the western side of that island. In Teneriffe it was likewise captured by Dr Clotch, though sparingly, on the Cañadas.

The *B. Teneriffæ* is remarkable, *inter alia*, for a certain, though not very considerable, sexual dissimilarity which it presents (for I think I can scarcely be mistaken in regarding the two forms now before me as sexes of a single species). Thus, the male (which would seem to be rather the rarer of the two) is, on the average, a little larger and squarer in outline, and has its pygidium more uniformly cinereous (there being no indication of the obscure, ill-defined darker

patches towards the apex which are seldom absent in the opposite sex), and its antennæ and legs are longer,—added to which, the two hinder tibiæ are perceptibly slenderer, and perhaps a trifle less evidently subserrated along their outer edge, than is the case in the females

584 *Bruchus floricola*, n sp

*B* minutus, ovatus, niger, subtus dense cinereo-, supra inæqualiter cinereo- et fusco-squamosus, antennarum (robustarum) basi pedibusque rufo-testaceis, femoribus (præsertim posticis, subtus denticulo minutissimo vix observando armatis) tibusque posticis basi nigris, capite prothoraceque subconico dense punctulatis, elytris striatis, interstitiis subnigris, leviter subreticulato-rugulosis, tibus posticis robustis

*Variat* antennis vel omnino rufo-testaceis, vel versus apicem obscurioribus—Long corp lin  $\frac{2}{3}$ —1

*Habitat* insulas Canarienses, in Gomera et Palma solis haud observatus

This excessively minute *Bruchus* would seem to be the representative in these islands of the Madeiran *B. lichenicola*, which at first sight it very closely resembles. Nevertheless, when accurately inspected, it will be seen to differ from that insect in many particulars. Thus, its antennæ and legs are a little longer and thicker, its femora and two hinder tibiæ are black at their respective bases the latter are very perceptibly broader and rather less straightened, and the third joint of its four anterior feet is somewhat more expanded. Its elytra, also, are a trifle convexer and less opaque, and its prothorax perhaps is a little more deeply sinuated posteriorly.

The *B. floricola* is probably universal throughout the Group, though I did not happen to observe it in either Gomera or Palma, but in Lanzarote, Fuerteventura, Grand Canary, Tenerife, and Hierro I have captured it, more or less abundantly. It occurs more especially, on flowers, in calcareous spots of intermediate elevations. My Fuerteventuran examples are from Agua Bueyes and the Rio Palmas, the Canarian ones from the vicinity of Tafira (adjoining the region of El Monte), and the Teneriffan ones from the mountains above S<sup>ta</sup> Cruz. Those from Lanzarote were, I think, taken at Haria, and the Hierro ones in the neighbourhood of Valverde.

585 *Bruchus antennatus*, n sp

*B* ater sed minute subflavescenti-pubescent, subopacus capite prothoraceque conico densissime ruguloso-punctulatis, elytris subcrenato-striatis, interstitiis densissime et minute subpunctulato-rugulosis, antennis pedibusque vix dilutionibus, illis in maribus

longissimis serratis, his in utroque sexu elongatis gracilibus, femoribus posticis vix edenticulatis—Long corp lin  $1\frac{1}{2}$ – $1\frac{2}{3}$

*Habitat* in montibus Canariæ, Teneriffæ et Palmæ, in pinetis paucè degens

This most interesting *Bruchus*, so remarkable for its deep-black hue (the surface, however, being more or less clothed with a very minute, short, decumbent, yellowish- or whitish-brown pubescence), its excessively conical prothorax, slender legs, and the enormous length of its male antennæ, would seem to be extremely rare, though widely spread over the archipelago, and confined (so far at least as I have observed hitherto) to those regions of a high elevation occupied by the ancient Pinals, though, at the same time, I am not absolutely certain that it is in any way actually dependent upon the fir-trees. I have taken it in Grand Canary, Teneriffe, and Palma, in the first of these in the Pinal of Tarajana (above San Bartolomé), in the second at the Agua Mansa (close to a *Pinus canariensis*), and in the third in the great Pinal of the Banda (above the plains of Los Llanos) towards the Caldera. It will probably be found in all the islands of the Group except Lanzarote and Fuerteventura.

## Fam. 47. AGLYCYDERIDÆ.

### Genus 221 AGLYCYDERES

Westwood, in *Proc Ent Soc Lond* (1863)

*Corpus* oblongum, subdepressum, rugosum, valde subsquamoso-setosum, *capite* deplanato, *oculis* minutis rotundatis alte prominentibus, in fœmineis triangulari apice truncato, in maribus latissimo necnon ante oculos in cornu utrinque producto et mox pone oculos rigide setoso-pennellato. *Antennæ* rectæ, graciles, filiformes, 11-articulatæ, art<sup>o</sup> 1<sup>mo</sup> longiusculo crassiusculo, ultimo elongato-ovali. *Mandibulæ* validæ, breves, crassæ, subtriangulares, obtuse tridentatæ. *Maxillæ* lobis singulis subtriangularibus, intus spinis rigidis curvatis ciliatis, instructæ. *Palpi maxillares* brevissimi, crassi, conici, articulis 1<sup>mo</sup>, 2<sup>do</sup> 3<sup>tio</sup>que brevissimis. *Labiales* minuti, conici. *Pedes* breves, crassi, ad basin (præsertim *posturi*) parum distantes, *tarsi* brevissimis, 4-articulatis, articulis 1<sup>mo</sup> et 2<sup>do</sup> sublobatis, 3<sup>io</sup> minuto, ultimo longiore late clavato. *unguiculis* simplicibus minuto

The affinities of this most anomalous genus, which Prof Westwood has not discussed, are extremely difficult, and whilst placing it in the present position, I do so with the utmost hesitation, for although in many respects it certainly approaches the *Anthribidæ*, yet the structure of its oral organs (as evinced by its triangular mandibles and maxillæ, and its short, thick, conical palpi) is unmistakably that

of the sub-Rhynchophorous Xylophagous groups (such as *Hylastes*, &c) at the *opposite* extremity of the *Cuculionidæ*. Yet its entire external conformation, particularly of the antennæ, removes it completely from all such forms, whilst its 4-jointed (or "pseudotrimerous") feet (the third articulation being excessively minute) render its relationship still more dubious. Upon the whole, it seems to me to combine *the two opposite extremes* of the *Rhynchophora* (as represented by the *Hylesinidæ* and *Anthrribidæ*) with certain setose genera of the *Colydadæ* (such as *Sarrotrium* and *Diodesma*) in which the body is hispid and the tarsi quadriarticulate. Nevertheless, not venturing to assign it positively to the *Anthrribidæ*, I have been compelled to place it in a separate Family.

### 586 *Aglycyderes setifer*

*A. niger* vel piceo-niger, opacus, valde asperato-rugosus setisque robustis squamiformibus fusco-albidis (in capite prothoraceque subdemissis, sed in elytris erectis) obsitus, prothorace subquadrato, ad latera rotundato, profunde canaliculato, elytris dense et rugose punctato-striatis, interstitiis subelevatis, antennis (gracilibus) pedibusque (robustis) paulo picescentioribus, squamosis — Long corp. lin 1-1 $\frac{1}{3}$

*Aglycyderes setifer*, *Westw., loc. cit.* (1863)

*Habitat* in inferioribus intermedisque Lanzarotæ, Fuerteventuræ, Canariæ, Teneriffæ et Palmæ, vel in caulibus *Euphorbiarum* putridis vel sub cortice *Ficorum* arido laxo, hinc inde congregans

This curious little insect, so remarkable (even *prima facie*) for its dark, brownish-black, opaque, setose surface, thick, abbreviated legs, slender antennæ, and for its (flattened) head being in the female sex triangular, whilst in the male it is dilated in front of either eye into a lateral lobe, or horn, will almost certainly be found universally throughout the Group, though hitherto it does not happen to have been observed in either Gomera or Hierro, but in Lanzarote, Fuerteventura (or rather on the little island of Lobos, off the extreme north of it), Grand Canary, Teneriffe, and Palma I have taken it (more or less abundantly). I first detected it congregating beneath the dry loosened bark of a fig-tree in the waste ground above the Puerto Orotava of Teneriffe, and I subsequently met with it under similar circumstances in the Banda of Palma. Nevertheless even in those instances it was in the immediate vicinity of *Euphorbias*, and since I have also actually captured it (on the mountains of Teneriffe, above Laguna, as well as in Lobos, and elsewhere) within the rotten stalks of the *Euphorbia canariensis*, I suspect that it is, at any rate in its earlier stages, of *Euphorbia*-infesting habits.

**Fam. 48. CERAMBICIDÆ.****Genus 222 HYLOTRYPES.**

Seville, *Ann de la Soc Ent de France*, iii 77 [script. *Hylotrypes*] (1834)

**587. Hylotrypes bajulus.**

*Cerambyx Bajulus*, *Linn*, *Fna Succ* 489 (1746)

*Callidium Bajulus*, *Brullé*, in *Webb et Berth (Col)* 62 (1838)

*Hylotrypes Bajulus*, *Muls*, *Longic de France*, 55 (1840)

—— —, *Woll*, *Cat Mad Col* 125 (1857)

*Habitat* Teneriffam, in urbe Sanctæ Crucis haud infrequens, certe introductus

This common European insect has been introduced into the Canaries, in like manner as it has into Madeira and at the Azores. It appears, however, to be scarce. I have taken it occasionally in Teneriffe, in the streets and houses of S<sup>ta</sup> Cruz, and it has likewise been communicated from the same island by the Barão do Castello de Paiva.

**Genus 223 BLABINOTUS**

Wollaston, *Ins Mad.* 426 (1854)

**588 Blabinotus spinicollis.**

*Blabinotus spinicollis*, *Woll*, *Ins Mad* 426 tab ix f 1 (1854)

—— —, *Id*, *Cat Mad Col* 126 (1857)

*Habitat* Teneriffam et Palmam, sub cortice laxo in lauretis parum excelsis parcissime degens

The *B spinicollis*, so generally (though sparingly) distributed over the laurel-districts of Madeira, occurs in similar situations at the Canaries—where, however, it would seem to be of the utmost rarity. At the end of May 1858 I captured a single example of it in the island of Palma (high up in the Barranco de Galga), and a few weeks later I met with a second, in Teneriffe—under the dry, loosened bark of an old laurel in the wood of Las Mercedes.

**Genus 224 OXYPLEURUS.**

Mulsant, *Longic de France*, 57 (1840)

**589 Oxypleurus pnicola.**

*Oxypleurus pnicola*, *Woll*, *Journ of Ent* n 102 (1863)

*Habitat* Palmam, exemplar unicum (mortuum) in cono quodam *Pini canariensis* arido, tempore vernali a d 1858, collecti

The generic distinctions between *Oxypleurus* and *Blabinotus* have been fully pointed out in my Paper “on the Canarian Longicorns”

But, apart from minor characters, I may just add that the present insect may at once be recognized from the *B. spinicollis* by its paler or more reddish-brown hue and less hairy (though pubescent) surface, by its convexer and more *even* head and prothorax, larger and more emarginated eyes, and by its antennæ being more distant at their base and with their third joint a trifle shorter (instead of longer) than the fourth. Its prothorax, also, is more abbreviated—being truncated at the apex, where its edge is drawn in and subsinuated (instead of being slightly raised and, if anything, somewhat produced).

The only example of the *O. pinicola* which I have seen was taken by myself, during the spring of 1858, from within a dried cone of a *Pinus canariensis* in the island of Palma—high up in the Barranco above S<sup>ta</sup> Cruz. It will probably be found, therefore, to occur generally (though perhaps sparingly) in the Pinals of intermediate elevations. It is closely allied to the *O. Nodieri* of southern Europe, but is a little less pubescent, with its prothorax altogether a trifle narrower, more contracted behind (where the sides are rather straighter, though very oblique), and with the lateral spine shorter and more *anguliform*, and with its elytra *almost* free from the small, rounded, punctiform, subglabrous spaces which are tolerably evident (and have somewhat the appearance, *primâ facie*, of tubercles) in that species. From the Madeiran *O. Bewickii* it may be known by its prothorax being more coarsely punctured, less conspicuously margined along the anterior edge, and with the lateral spine very much shorter and more anguliform, and by its elytra being comparatively free from subglabrous spaces.

#### Genus 225 CRIOCEPHALUS.

Mulsant, *Longic de France*, 63 (1840)

#### 590 Criocephalus rusticus.

*Cerambyx rusticus*, *Linn., Fina Suec* 492 (1746)

*Callidium rusticum*, *Brulle, in Webb et Berth (Col)* 62 (1838)

*Criocephalus rusticus*, *Muls., Longic de France*, 63 (1840)

— —, *Woll, Cat. Mad. Col* 124 (1857)

*Habitat* in intermediis Teneriffæ et Palmæ, rarissimus

The European *C. rusticus*, which occurs in the pine-woods of comparatively recent introduction on the mountains of Madeira, is apparently rare at the Canaries—though perhaps it might be found more abundantly if the ancient Pinals were diligently searched. Hitherto, however, I have myself met with it only in Palma—where, during June of 1858, I obtained a few specimens at the Banda, on the western side of that island. Nevertheless a Teneriffan example, pur-

porting to have been taken at the Agua Garcia, has been communicated by the Barão do Castello de Paiva

The Canarian examples have the tubercles on either side of their prothorax a trifle more developed than is the case in specimens which I have examined from the south of Europe, and the posterior edge of their pronotum is somewhat less thickened and more sinuated, but I can detect no difference about them of sufficient importance to warrant the suspicion that they are specifically distinct

### 591 *Criocephalus pinetorum*

*Criocephalus pinetorum*, Woll, *Journ of Ent* ii 103 (1863)

*Habitat* Palmam, in truncis vetustis *Pinis canariensis*, in pineto quodam antiquo elevato crescentis, Junio incunte a d 1858 repertus

The example from which this *Criocephalus* was described was captured by myself, in the pupa state, from the dead stump of a *Pinus canariensis*, in the old Pinal of the island of Palma between the plains of Los Llanos (of the Banda) and the great Caldera. Unfortunately it is scarcely mature, but I believe that it is truly the exponent of a separate species, and cannot be regarded as a depauperated individual of the *C. rusticus*. Nevertheless, until further specimens have been obtained, I can hardly consider that its differential characters have been satisfactorily defined

Assuming, however, the example above alluded to to be typical, I may add that the *C. pinetorum* would appear to be smaller and paler than the *rusticus*—being of a reddish-brown, with the limbs bright rufo-ferruginous, its forehead is more triangularly-impressed between the eyes, but less deeply foveolated in the centre, its prothorax, on which the lateral tubercles are fewer, has its anterior and posterior margins straighter (or less sinuated), and its elytra are rather more abbreviated behind, and have their longitudinal costæ less evident

Whether distinct or not from the *C. rusticus*, the present *Criocephalus* is decidedly common in the Pinal of Palma already referred to (and perhaps, therefore, throughout the Pinals generally), but as my visit there happened to be at the wrong season of the year for the perfect insect, I could only obtain larvæ and pupæ—both of which, however, were abundant in the decaying trunks of the pine-trees

### Genus 226 **HESPEROPHANES**

Mulsant, *Longic de France*, 66 (1840)

### 592 *Hesperophanes senex*

*Trichoferus senex*, Woll, *Ins Mad* 428 tab ix f 3 (1854)

*Hesperophanes senex*, *Id*, *Cat Mad Col* 127 (1857)

*Habitat* Teneriffam, a Barone "Castello de Paiva" communicatus, mihi non obviis

Apparently extremely rare at the Canaries, the only specimen which I have seen having been communicated by the Barão do Castello de Paiva—by whom it was obtained from an old (but very accurate) collection which was formed many years ago in Teneriffe. At Madeira it occurs sparingly, principally at low elevations around Funchal.

### 593 *Hesperophanes roridus*

*Callidium* (*Hesperophanes*) *roridum*, *Brulle, in Webb et Berth (Col)* 62 pl 1 f 6 (1838)

*Habitat?*

I can give no information about this insect, though I think that even M. Brullé's description will prevent its being assigned to any of the Longicorns enumerated in the present Catalogue. It must at any rate, therefore, have been included amongst the scanty material collected by MM. Webb and Berthelot, and which M. Brullé undertook to describe for their gigantic work, but as the latter never inserted a single critical remark upon any of the species—pertaining to their structure, habits, or *habitat*—I am unable, *inter alia*, to state even the island in which it was found.

### Genus 227 *CLYTUS*.

*Fabricius, Syst. Eleu.* ii 345 (1801)

### 594 *Clytus Webbii*

*Leptura* 4-punctata (var.)?, *Geoffi, Hist. des Ins.* 213 (1762)

*Clytus* 4-punctatus (var.)?, *Fab., Ent. Syst.* i ii 337 (1792)

— *Webbii, Brulle, in Webb et Berth (Col)* 63 (1838)

— *Webbei, Gory, Mon. des Clytus*, 80 (1841)

*Habitat* Teneriffam (see Dom. Gory), mihi non obviis

In my Paper "on the Canarian Longicorns," I stated my reasons for suspecting that this insect (which M. Brullé considered to be a mere variety of the European *C. 4-punctatus*) is not properly a Canarian one—or, at any rate, that its *habitat* appears to have been so confused by Mr. Webb, who would seem to have reported it both for *Madeira and the Canaries*, that nothing certain can be affirmed respecting it. It is far from unlikely that Mr. Webb (whose excessive inaccuracy in mixing up his Madenian and Canarian material has been more than once commented upon, and of which I possess the most conclusive evidence) may have obtained it in Funchal (perhaps introduced with foreign timber), then taken it (as he undoubtedly did many of his

species—both of insects and shells) to Teneriffe, and finally reported it for both Groups—when in reality it pertained to neither of them ! At least, taking all things into account, some such solution as this seems to be highly probable. Nevertheless, since it is cited (even though on Mr Webb's authority) for Teneriffe by M Gory, and admitted (on the same authority) by M Brullé as *Canarian* (for it was not the habit of the latter to record the particular island in which *any* of Mr Webb's species were taken), I have no choice but to include it in the present Catalogue \*

### Genus 228 GRACILIA.

Serville, *Ann de la Soc Ent de France*, iii 81 (1834)

#### 595 *Gracilia pygmæa*.

*Callidium pygmæum*, *Fab*, *Ent Syst* i ii 323 (1792)

*Obrum minutum* *Steph*, *Ill Brit Ent* iv 250 (1831)

*Gracilia pygmæa*, *Muls*, *Longic de France*, 103 (1840)

*Habitat* Fuerteventuram, Gomeram et Palmam, præsertim in vineis circa domos, hinc inde parum vulgaris

This common European insect has doubtless been naturalized at the Canaries from more northern latitudes. It seems to be attached principally to the different kinds of wicker- and basket-work, and to occur consequently in (or about) houses more frequently than elsewhere. Thus, at the Souccs, in the island of Palma, I took it abundantly, in May 1858, emerging from its perforations on the sides of the light open trays in which silkworms were fed, and during April 1859 I met with it in the Rio Palmas of Fuerteventura. More recently a single example has been communicated by Dr Crotch, captured by himself in Gomera. It is found, though sparingly, in similar situations at Madeira †

\* A (supposed) second *Clytus* (the *C griseus*) is indeed quoted by M Gory as Teneriffan, and by M Brullé as Canarian, in both cases on the authority of a specimen in the collection of Mr Webb, but I really cannot conscientiously include it *also* in the body of this work,—first, because the evidence for its admission is quite as unsatisfactory as in the case of the *C Webbii*, and, secondly, because the *C griseus* is allowed in the European Catalogues to be a mere variety of the common *4-punctatus*, *Fab*—to which species it is probable that even the *C Webbii* equally pertains! Hence, apart from all consideration of the reasons (alluded to above) for which I would expunge them *both* from the Canarian fauna, I think that if *one* of the two is admitted (on the unsatisfactory evidence of Mr Webb) it is as much as should be ventured upon, seeing that the utmost that can be conjectured is that some slightly erratic state (or states) of the *C 4-punctatus* may *perhaps* have been obtained by Mr Webb in (either Madeira or) Teneriffe!

† In a Paper on "Additions to the Madeiran Coleoptera" published in the 'Ann of Nat Hist' for December 1858, I inadvertently quoted the above insect as the *Obrum brunneum*, *Fab*—from which, however, it is totally distinct

## Fam. 49. LAMIADÆ.

## Genus 229 LEPROSOMA

(Dejean) Thoms, *Essai Classif Ceramb* 23 (1860)596 *Leprosoma gibbum*.*Leprosoma asperatum*, Dej, *Cat* 372 (1837)*Lama gibba*, Brulle, in *Webb et Berth* (Col) 62 pl 1 f 5 (1838)*Lepiosoma asperatum*, Thoms, *Essai*, 23 (1860)— *gibbum*, Woll, *Trans Ent Soc Lond* 1 178 (1862)*Habitat* Fuerteventuram et Teneriffam, in truncis Euphorbiarum emortuis degens

Of this singular insect, which is attached exclusively to the decaying stems and branches of the various Euphorbias (within which it undergoes its transformations), I gave a full description in my Paper "on the *Euphorbia*-infesting Coleoptera of the Canary Islands" At the beginning of April 1859 I took it, both in the imago and pupa state (though particularly the latter), on the hills above S<sup>ta</sup> Maria Betancuria, in the Rio Palmas of Fuerteventura, and during the following month (as well as in the preceding February) I met with it on the mountain-slopes of Teneriffe between S<sup>ta</sup> Cruz and Las Mercedes, and towards Laguna Teneriffan examples (obtained from an old collection) have also been communicated by the Barão do Castello de Paiva

## Genus 230 STENIDEA.

Mulsant, *Coléopt de France (Lamell Suppl)* (1842)

The insects enumerated below I carelessly referred, in my Paper "on the *Euphorbia*-infesting Coleoptera of the Canary Islands," to *Blabnotus* In reality, however, they belong to a totally different Section of the *Eucerata* (as has been recently pointed out by Mr Pascoe),—their deflexed head, more deeply emarginate and less prominent eyes, the apically-acute (instead of securiform) last joint of their palpi, and their much longer antennæ, all tending to remove them from the *Callidrum*-forms of the *Cerambycidae* into the Saperdideous ones of the *Lamiadae*—the position, in fact, which is ordinarily conceded to the genus which must undoubtedly receive them

597 *Stenidea annulicornis*.*Cerambyx annulicornis*, Brullé, in *Webb et Berth* (Col) 62. pl 1 f 3 (1838)*Blabnotus annulicornis*, Woll, *Trans Ent Soc Lond* 1 179 (1862)*Stenidea annulicornis*, Id, *Journ of Ent* 11 108 (1863)*Habitat* in Teneriffa et Hierro, sub cortice *Euphorbiarum* emortuorum laxo latitans

The *S. annulicornis*, the distinctive characters of which I have fully pointed out in my Paper "on the *Euphorbia*-infesting Coleoptera of the Canary Islands," occurs beneath the bark, and within the branches, of dead *Euphorbias*—in which situations I have taken it on the mountains above Sta Cruz of Teneriffe, and in the lower regions of El Golfo on the western side of Hierro. A Teneriffan specimen has also been communicated by Dr Crotch.

#### 598 *Stenidea albida*.

*Cerambyx albidus*, *Brulle*, in *Webb et Berth (Col)* 62 pl 1 f 4 (1838)

*Blabimotus albidus*, *Woll*, *Trans Ent Soc Lond* 1 180 (1862)

*Stenidea albida*, *Id*, *Journ of Ent* 11 109 (1863)

*Habitat* Lanzarotam, Fuerteventuram et Teneriffam, in usdem locis ac præcedens

The whiter and less dense pubescence of the *S. albida*, in conjunction with its nearly concolorous prothorax (which is free from a broad pale band down the centre, and has the lateral spine still more powerfully developed), its less evident and more broken clytral lines, and its usually more conspicuous clytral (punctiform) spots, will readily suffice to distinguish it from the *S. annulicornis*. Like that species, it is found (I believe exclusively) beneath the loose outer fibre of the various *Euphorbias*—under which circumstances I have captured it in Lanzarote and Fuerteventura, as well as at Taganana and on the mountains above Sta Cruz in Teneriffe.

#### 599 *Stenidea pilosa*.

*Blabimotus pilosus*, *Woll*, *Trans Ent Soc Lond* 1. 181 (1862)

*Stenidea pilosa*, *Id*, *Journ of Ent* 11 109 (1863)

*Habitat* Lanzarotam, in *Euphorbias* emortuis, rarissima

The present *Stenidea* would appear to be of the greatest rarity—three specimens only, all of them from Lanzarote, having as yet come beneath my notice. The first of them was captured by Mr Gray, during January 1858, near Hama, in the north of that island, and the other two by myself, in the same region, exactly twelve months afterwards. Like the two preceding species, I believe it is strictly of *Euphorbia*-infesting habits.

#### 600 *Stenidea Hesperus*.

*Stenidea Hesperus*, *Woll*, *Journ of Ent* 11 110 (1863)

*Habitat* ins Hierro, die 11 Feb A D 1858, exemplar unicum supra folia *Rumicis lunariæ* deprehendi

The present *Stenidea* is hitherto unique, the specimen described

from in my Paper on the Canarian Longicorns having been beaten off a bush of the *Rumex lunaria*, on the 11th of February 1858, in the island of Hierro—at a low elevation (scarcely indeed above the sea-level) on the ascent from Port Hierro to Valverde *Prima facie* it somewhat resembles a minute example of the *S. pilosa*, nevertheless it is much smaller than that insect, and its antennæ are considerably longer, its pubescence is more cinereous (or of a less yellowish white), its surface is entirely free (except at the apex of the elytra and on the prothorax) from additional erect hairs, its prothorax is concolorous, rather less constricted behind, and has its lateral spine (although small) more defined, or less anguliform, and its elytra are more rounded-off separately at their tip, and are more perceptibly ornamented with broken longitudinal darker lines

### Genus 231 AGAPANTHIA.

Serville, *Ann de la Soc Ent de France*, iv 35 (1835)

#### 601 *Agapanthia cardui*

*Colambyx cardui*, Linn, *Syst Nat* (ed 12) i 632 (1767)

*Saprida suturalis*, Fab, *Syst Eleu* ii 326 (1801)

*Leptura suturalis*, Brulle, in *Webb et Berth* (Col) 63 (1838)

*Agapanthia suturalis*, Muls, *Longue de France*, 178 (1840)

*Habitat* in Canaria, Teneriffa et Palma, ad flores caduorum, tempore vernali haud infrequens

The *A. cardui*, which is pretty general throughout the south of Europe and the north of Africa, is widely spread over these islands—where it occurs, principally on the flowers of thistles, at intermediate elevations. I have taken it in the region of El Monte in Grand Canary, at Las Mercedes in Teneriffe, and in Palma

### Fam. 50. CRIOCERIDÆ.

#### Genus 232 LEMA

Fabricius, *Ent Syst* v, *Suppl* 90 (1798)

#### 602 *Lema melanopa*.

*Chrysomela melanopa*, Linn, *Fna Suec* 573 (1761)

*Lema melanopa*, Brulle, in *Webb et Berth* (Col) 74 (1838)

—, Woll, *Ins Mus* 436 (1854)

—, Id, *Cat Mus Col* 129 (1857)

—, *Handlung, Geolog Verhältn Lanz und Fuert* 141

*Habitat* insulas omnes Canarienses, vulgaris, præsertim in cultis degens

This common European insect (which is universal also at the Madeiras—being found in Madeira proper, Porto Santo, and on the Desertas) abounds in the Canarian Group, in the whole seven islands of which I have myself captured it except in Gomeia—where, however, it was taken by Dr Crotch. In Lanzaote it was met with likewise by M Hartung, in-Tenriff by the Barão do Castello de Paiva and Dr Crotch, and in Palma by Dr Crotch and Mr Gray. It occurs chiefly in cultivated spots, particularly corn-fields, and has probably been introduced from more northern latitudes.

### Genus 233 **CRIOCERIS**

Geoffroy, *Ins des Env de Paris*, 1 237 (1764)

#### 603 **Crioceris nigropicta**, n sp

*C* pallide flava, nitida, capite, prothoracis disco scutelloque æneo-nigrescentioribus, illo trapeziformi, latiusculo, intra oculos integros depresso, grosse substriguloso-ruguloso et ibidem profunde canaliculato, hoc breviter cylindrico (ad basin vix constricto), parce punctato, clytris profunde seriatim punctatis, læte nigro-pictis (sc in suturâ, humeris, plagis parvis medius subconfluentibus subbasalibus, fascisque duabus abbreviatis suboblongiformibus pone medium positâ, nigris), antennis pedibusque robustis, illis testaceo-ferrugineis, his testaceis, tibiis (præsertim anticis) extus in medio plus minus evidenter nigro-plagiatis—Long corp lin  $2\frac{1}{2}$

*Habitat* Canariam Grandem, rarissima, mense Aprilis a d 1858 in totius *Arundinis donacis* ad Mogan parvissime capta

This beautiful *Crioceris*, so remarkable for its light-yellow elytra being prettily ornamented with black spots and broken fasciæ, and which has the head and (though more palely so) the prothoracic disc of a brassy-black, appears to be one of the rarest of all the Coleoptera of this archipelago. Indeed the only four specimens which I have seen were collected by myself in Grand Canary—brushed from off some plants of *Arundo donax*, on the 16th of April 1858, at Mogan, in the south-western district of that island.

### Fam. 51. **EUMOLPIDÆ.**

#### Genus 234 **PSEUDOCOLASPIS**

Laporte, *Hist Nat des Ins Col* n 514 (1840)

#### § I *Scutellum subsemicirculare*

#### 604 **Pseudocolaspis divisa**, n sp

*P* obscure ænea, grosse sed breviter argenteo-pubescent, dense et parum minute punctulata, prothorace longiusculo, convexo, ad

latera rotundato-amphato, elytris breviusculis, convexis, ad latera rotundatis, vix subseriatim pubescentibus, antennis rufescentibus, apicem versus obscurioribus, pedibus infuscato-rufescentibus, femoribus obscurioribus—Long corp lin  $1\frac{1}{2}$ – $1\frac{2}{3}$

*Habitat* Lanzarotam borealem, sub lapidibus in aridis, rarissima

The present *Pseudocolaspis*, which appears to be of the greatest rarity, and confined (so far as I have observed hitherto) to Lanzarote, may be known from the other species here enumerated by its prothorax and elytra being, both of them, more convex and more rounded at the sides, and by the former being a little longer, whilst the latter are very evidently shorter, than is the case in any of its allies, by its scutellum being more semicircular (instead of subquadrate), and less truncated behind, and by its surface being more regularly *brassy*, and somewhat less densely clothed with short silvery pile. The few specimens which I have seen were taken in the extreme north of Lanzarote—from beneath stones on the dry rocky ground at the base of the Risco, and immediately behind the Salinas

## § II *Scutellum subquadratum*

### 605 *Pseudocolaspis dubia*, n sp

*P* præcedenti fere similis, sed paulo minus ænea, prothorace elytrisque minus convexis necnon ad latera minus rotundatis, illo brevior, his longioribus, magis oblongis, antennis pedibusque subgracilioribus—Long corp lin  $1\frac{1}{2}$ – $1\frac{2}{3}$

*Habitat* Fuerteventuram, Aprilis incunte a d 1859 in Rio Palmas capta

In its subquadrate scutellum and oblong outline, this species has more in common with the following two than it has with the preceding one, nevertheless in some respects it is intermediate between the latter and them. It may be known from the *splendidula* and *obscuripes* (with which alone, from the shape of its scutellum, it need be compared) by its somewhat shorter prothorax (which is obscurely ferruginous along its anterior edge), by its rather convexer and more rounded elytra, slenderer limbs, and altogether slightly different hue. The only three examples which I have seen were captured by myself in the Rio Palmas of Fuerteventura, at the beginning of April 1859.

### 606 *Pseudocolaspis splendidula*.

*P* læte æneo-cuprea, grosse sed breviter argenteo-pubescent, dense et minute punctulata, elytris plus minus obsolete subseriatim pubescentibus, antennis rufescentibus, apicem versus plus minus obscurioribus, pedibus rufescentibus

*Variat* femoribus plus minus obscure nigro-maculatis —Long corp  
lin  $1\frac{1}{2}$ —2 $\frac{1}{4}$

*Pseudocolaspis splendidula*, Woll, *Ann Nat Hist* ix 442 (1862)

*Habitat* in Canaria, Palma et Hierro, in locis inferioribus et intermediis (præsertim illis) degens

This is certainly the most beautiful of the four species of *Pseudocolaspis* here enumerated, and it would seem likewise to be more widely spread over the archipelago, having been observed in Grand Canary, Palma, and Hierro—occurring principally in low and sunny spots, and becoming gradually rarer to an elevation of about 1000 feet above the sea. Thus, in the low sandy region around Maspalomas, in the extreme south of Grand Canary, it abounds, on various shrubs which stud that arid tract, and extends also to a certain distance on the mountains which rise gradually to the north of it. In Palma I took it sparingly in the Barranco above Sta Cruz. And in Hierro a single example was captured by Mr Gray—at a low altitude (scarcely indeed above the sea-level) on the ascent from Port Hierro to Valverde, on the 11th of February 1858.

The *P splendidula* may easily be recognized by its more beautifully metallic surface (which is generally of a coppery-brassy hue) and by its brightly rufo-ferruginous limbs (the club of the antennæ being alone obscured). The short silvery pubescence with which it is clothed is perhaps somewhat denser than is the case in the *obscuripes*, and is on the elytra rather less evidently disposed in longitudinal lines, nevertheless the individuals now before me from Palma and Hierro have this latter peculiarity a little less apparent than in the ordinary Grand-Canarian ones.

#### 607 *Pseudocolaspis obscuripes*.

*P* obscure ænea, grosse sed breviter argenteo-pubescent, dense et parum minute punctulata, elytris obsolete seriatim pubescentibus, antennis nigrescentibus, articulo secundo ad basin rufescentiore, pedibus submetallico-nigris —Long corp lin  $1\frac{1}{2}$ —2

*Pseudocolaspis obscuripes*, Woll, *Ann Nat Hist* ix 441 (1862)

*Habitat* Canariam Grandem, ad flores *Cistorum* (sc *C monspeliensis* et *vagantis*) in montibus excelsis crescentium, deprehensa

The altogether obscure surface of this *Pseudocolaspis*, which is of a dull-brassy hue with the limbs (except the second antennal joint) of a metallic black, in conjunction with the short silvery pile with which it is clothed being on the elytra perhaps rather more perceptibly disposed in longitudinal rows, will serve to distinguish it from the *P splendidula*. I have observed it hitherto only in Grand Canary,

where it would seem to be confined to lofty altitudes, and to be particularly attached to the flowers of the *Cistus*. Thus, in the elevated Pinal of Tarajana, above San Bartolomé, I captured it, during April 1858, on the blossoms of the *Cistus vagans* and *monspeliensis*, Linn., rather abundantly.

## Fam. 52. CRYPTOCEPHALIDÆ.

### Genus 235 CRYPTOCEPHALUS

Geoffroy, *Hist. Abr. des Ins. de Paris*, 1: 231 (1762)

#### 608 *Cryptocephalus nitidicollis*, n. sp.

*C. nitidus*, flavo-testaceus, capite prothoraceoque (convexo) nitidissimis, minute, parce et levissime punctatus (sæpe fere impunctatus), illo longitudinaliter in fronte et hinc utrinque in disco antico plus minus rufo-fulvescenti-obscuriore, elytris profunde striato-punctatis, vel omnino pallidis vel per suturam necnon utrinque in plagâ longitudinali subobliquâ discali plus minus obscurioribus, antennis (gracilibus) pedibusque pallide testaceis, illis versus apicem obscurioribus.

*Variat* ( præsertim in locis editioribus) maculis plagisque fere nigrescentibus, necnon, in locis valde elevatis, etiam pedibus obscurioribus.—Long. corp. lin. 1-1½.

*Habitat* insulas omnes Canarienses, longe lateque parce diffusus—ab orâ maritimâ usque ad 9000' s. m. ascendens.

The present *Cryptocephalus* is universal throughout the Canarian archipelago, in the whole seven islands of which I have myself captured it except in Gomeira—where, however, four examples (now before me) were taken by Dr. Crotch. In Lanzarote and Palma it was met with also by Mr. Gray, and in Teneriffe by the Barão do Castello de Paiva. Although nowhere very common, it occurs independently of elevation—from the level of the shore to about 9000 feet above the sea, and in the higher altitudes it is apt to vary a good deal in hue—the obscure portions of its surface (and occasionally even the limbs) becoming at times almost black. In this state I have brushed it off the blossoms of the “Retama” on the lofty Cumbre of Teneriffe above Ycod el Alto and adjoining the Cañadas (where it was likewise found, subsequently, by Dr. Crotch), as well as on the *opposite* Cumbre (above the Agua Mansa). My other Teneriffian specimens are principally from the Agua Mansa, Orotava, and the mountains above S<sup>ta</sup> Cruz. In Grand Canary it is pretty general throughout the region of El Monte, as well as at Maspalomas (in the south of the island), whilst my Palman examples are chiefly

from the Barianco de Agua, and the Hierro ones from the region of El Golfo

Both of these Canarian *Cryptocephali* are closely related to the *C crenatus*\* of Madeira, and are also very nearly allied *inter se*, but that they are not sexual forms of a single species I am convinced, inasmuch as I possess males and females of them both. Apart, however, from the greater instability of its colour, and its apparently wider range (both horizontal and vertical), the *C nitidicollis* may immediately be known by its bright and almost unpunctured prothorax, and by its elytral striæ being less impressed.

#### 609 *Cryptocephalus puncticollis*, n. sp.

*C* præcedenti similis et valde affinis, sed prothorace vix brevior minusque convexo necnon subopaco (haud nitido) et profunde denseque punctato, elytris ad apicem sensim minus singulatim rotundatis, stris (profunde punctatis) magis impressis, quare interstitiis paulo magis convexis, pedibus vix crassioribus—Long corp. lin.  $1-1\frac{2}{3}$

*Habitat* in Teneriffa, Palma et Hierro, sat rarus

As may be gathered from what has already been said, the present *Cryptocephalus* may immediately be recognized from the last one by its prothorax being a trifle shorter and less convex, as also subopaque and deeply and closely punctured (instead of being bright and nearly impunctate), by its elytra (which are rather less rounded off, separately, at their respective apices) having their coarsely punctured striæ more impressed, and therefore their interstices a little more convex, and by its legs being, on the average, perhaps somewhat thicker, or more robust. Moreover the sixteen specimens now before me are uniformly pale, there being no trace of the darker markings which *certain* examples of the *nitidicollis* (particularly those from the higher elevations) tend to assume, but whether this character is a constant one, I am of course unable to affirm.

The *C puncticollis* appears to be rather scarcer, and less widely spread, than its ally, and may perhaps be confined to the central and western islands of the archipelago. At any rate I have observed it hitherto only in Teneriffe, Palma, and Hierro, in the first of which it has also been taken by Dr Crotch. My Teneriffan examples are from Taganana, Souzal, and the Agua Garcia.

\* The Madeiran *C crenatus* differs, *inter alia*, from both of the Canarian species in having its elytral striæ finely and *closely crenated* (instead of deeply and remotely punctured). In the sculpture of its prothorax it is somewhat intermediate between the *nitidicollis* and *puncticollis*—though *nearer*, I think, to the former.

Genus 236 **STYLOSOMUS.**Suffrian, in *Linn Ent* iii 146 (1848)610 **Stylosomus bipagiatus**, n sp

*S* flavo-testaceus, capite prothoraceque sat grosse punctatis, hœc immaculato sed basin versus (elevatam) sæpius paulo infuscatiore, elytris profunde substriato-punctatis, oculo armato minute seriatim pubescentibus, pone scutellum obsoletissime et pone medium obsolete transversim nigro-fasciatis (fasciâ anticâ interdum omnino obsoletâ, et posticâ sæpius fractâ—vel plagam parvam singulam vel plagas duas disjunctas efficiente), antennis versus apicem tarsisque plus minus nigrescentibus—Long corp lin 1-1 $\frac{1}{4}$

*Obs*—Sp *S tamarisci* affinis, sed paulo major, pallidior et minus pubescens, capite prothoraceque immaculatis, elytris per suturam concoloribus sed transversim obsolete bifasciatis (fascius sæpius obsoletis, posticâ plagam parvam solam postmediam in elytris singulis positam efformante)

*Habitat* Fuerteventuram, in foliis *Tamarisc gallicæ* infra oppidulum Betancuriam, Aprilis ineunte a d 1859, sat copiose deprehensus

Although with similar habits, the present *Stylosomus* is certainly distinct from the *S tamarisci*, and, judging from the diagnoses, I think it can scarcely be referred to any of the few other members of the genus hitherto recorded. It was detected by myself in the Rio Palmas of Fuerteventura, at the beginning of April 1859—where I brushed it, not uncommonly, off the shrubs of *Tamara gallica* at a short distance below the little town of Sta Maria Betancuria

**Fam. 53. CHRYSOMELIDÆ.**Genus 237 **CHRYSOMELA**Linnaeus, *Syst Nat* edit 1 (1735)611 **Chrysomela sanguinolenta**

*Chrysomela sanguinolenta*, *Linn, Fna Suec* 165 (1761)

— *lucidicollis*?, *Kust, Kaf Eur op* ii 73 (1844)

— *sanguinolenta*, *Hartung, Geolog Ver halten Lanz und Fuert* 141, 142

*Habitat* sub lapidibus in insulis Canariensibus, in Gomera et Hierro solis adhuc haud detecta

The Canarian examples of this *Chrysomela* recede a little from the ordinary European ones, and may perhaps be referable to the *C lucidicollis*, Kust—which is admitted, however, to be a mere variety of the *sanguinolenta*. They differ in having their prothorax much more shining and almost impunctate (except at the sides), and in their enormous elytral punctures (or varioles) being perhaps a trifle

more distant *inter se* Although undoubtedly constant, I cannot think that such small modifications of a *type so well marked*, both in colour and sculpture, as that embodied by the *C sanguinolenta* can be indicative of more than a slight geographical phasis of that insect

The *C sanguinolenta* is common (particularly in low and sandy spots) in the eastern portion of the archipelago, but seems to become gradually rarer as we approach the west In all probability it is universal, though hitherto it does not happen to have been observed in either Gomera or Hierro, but in Lanzarote, Fuerteventura, Grand Canary, Teneriffe, and Palma I have myself captured it, more or less abundantly In Lanzarote and Fuerteventura it was found also by M Hartung, in the former of those islands by Mr Gray, and from Teneriffe it has been communicated by the Barão do Castello de Parva

### 612 *Chrysomela bicolor*

*Chrysomela bicolor*, *Fab, Syst Ent* 95 (1775)

—— *regalis*, *Oliv, Ent v* 91 538 tab 7 f 98 (1807)

—— *canariensis*, *Bulle, in Webb et Berth (Col)* 73 (1838)

—— *regalis*, *Hartung, Geolog Verh. Lanz und Fuert* 141

*Habitat* Lanzarotam, Fuerteventuram et Canariam, sub lapidibus haud infrequens

This large and superb *Chrysomela*, so well distinguished by its oblong outline, shining, brassy-green surface, and by the immense punctures (or varioles) of its elytra being extremely wide apart, each of them encircled by (or, as it were, *set into*) a rounded purple spot, and, although irregularly disposed, having a *tendency* to arrange themselves in pairs (a peculiarity which causes certain of the spots to be either almost or entirely confluent), appears to be confined, so far as observed hitherto, to the eastern portion of the archipelago—occurring in Lanzarote, Fuerteventura, and Grand Canary In the first of these (where it was found also by M Hartung) I have taken it, from beneath stones, on the open grassy plain above Los Valles de Sta Catalina, about two miles to the south of Hana, in the second (from whence it has likewise been communicated by the Barão do Castello de Parva) near Port Cabias, and in the third it was tolerably abundant around Maspalomas, in the extreme south of that island, during April 1858 The specimens offer scarcely any appreciable difference from a Sicilian one in my collection, unless it be that the elytra have a less tendency to be obsoletely striated and to be sprinkled with minute and shallow punctules between the varioles

I have adopted the specific name of *bicolor* (which is prior to that of *regalis*) for this insect on the authority of the ‘Cat Col Europæ’.

but it would certainly have been altogether impossible to recognize the present *Chrysomela* in the absurd "diagnosis" (so called) given of it by Fabricius

### 613 *Chrysomela obsoleta*

*C* rotundato-oblonga, crassa, obscure viridi-æneo-micans, ubique (oculo fortiter armato) subtilissime alutacea, capite prothoraceque minutissime et levissime punctulatis, hinc utrinque versus latera postice impresso (impressione antice omnino evanescente), elytris vage, parce et irregulariter subseriatim suboblique punctatis et punctulis minutissimis — <sup>inter</sup>mediis parce irroratis, antennis tarsisque nigro-piceis, alis minutissimis, angustissimis, ad apicem fusco-maculatis — Long corp. lin 4-6

*Chrysomela obsoleta*, Brulle, in Webb et Berth (Col) 73 (1838)  
 — —, Hartung, *Geolog. Verhältn. Lanz. und Fuert* 141

*Habitat* in Teneriffa et Gomera, præsertim in regionibus parum elevatis sylvaticis, hinc inde haud infrequens

The obscure brassy-green hue of this large and thick *Chrysomela* (which, however, is exceedingly variable in size), combined with its very minutely (sometimes scarcely perceptibly) punctulated head and prothorax (the latter of which is broadly margined, on either side, only behind,—the impression becoming evanescent anteriorly), and the small, distant, and widely scattered punctures of its elytra (the larger ones of which have a tendency to arrange themselves in suboblique longitudinal rows), will serve readily to distinguish it. In its general aspect it is a little suggestive, at first sight, of the common European *C. Banksii*, though abundantly distinct when closely examined. It is widely spread over Teneriffe, and in certain districts (particularly sylvan ones of a rather high elevation) tolerably common. Thus, I have taken it in considerable numbers from under the loose moss growing on the trunks of old trees on the summit of the Las Mercedes range, as also from beneath the outer fibre of dead Euphorbias on the mountains between S<sup>t</sup> Cruz and Laguna, as well as at Taganana, Souzal, the Agua Garcia, and the Agua Mansa. And I have met with it, at even a low altitude, in the Barranco do Passo Alto, near S<sup>t</sup> Cruz, in which locality, however, it had probably become naturalized (either through the medium of floods or human agency) from the heights above. It was also found by M. Hartung in Teneriffe, from whence additional specimens have been communicated by the Bañão do Castello de Paiva. It seems to exist likewise in Gomera, for I have examined an individual which was captured by D<sup>r</sup> Clotch at Hermigua\*.

\* The *C. obsoleta* is cited by M. Hartung as coming even from Lanzarote

614 *Chrysomela fortunata*, n sp

*C* præcedenti similis, sed cyanescens (nec viridi-aeneus), antennis pedibusque late rufo-ferrugineis, prothorace distinctius (sed minute et levissime) punctulato, antice paulo magis æqualiter angustato, angulis anticis sensim acutioribus, clytrorum punctis minoribus — Long corp lin  $4\frac{1}{2}$

*Habitat* Palmam, in montibus supra Sanctam Crucem semel lecta

Whether the single individual from which the present diagnosis has been compiled, and which was taken by myself in the Barranco above Sta Cruz in the island of Palma, be indicative of a species truly distinct from the preceding one, or merely of a well-marked insular variety, it is scarcely possible, in the absence of further material, to decide, nevertheless, since the differential characters which separate it from that insect, although perhaps not very important in kind, are so extremely conspicuous, I think that it would scarcely be safe to treat it as a phase of the *C. obsoleta*. If the example now before me be a normal one, the *C. fortunata* may be known from that species by its *bluish* (instead of brassy-green) hue and bright rufo-ferruginous limbs. Its prothorax, likewise (though very minutely and lightly so), is rather more evidently punctulated, and is a little more regularly attenuated in front (causing the anterior angles to be perceptibly acuter), and its clytral punctures are altogether smaller.

615 *Chrysomela rutilans*, n sp

*C* similis *C. obsoletæ*, sed nitidissima (nec minute alutacea), lætissime æneo-micans, prothorace majori, longiore, transverso-subquadrato (antice minus angustato), paulo distinctius (sed minute et levissime) punctulato necnon utrinque ad latera multo profundius impresso (impressione fere ad marginem anticum ductâ), clytrorum punctis minoribus, sed magis numerosis, alis parvis, angustis (vix minutissimis angustissimis) et ad apicem fusco-maculatis — Long corp lin  $4\frac{1}{2}$ —5

*Habitat* Gomeram, rarissima.

Hitherto three specimens only of this large and superb *Chrysomela* have come beneath my notice. They were all of them taken in the Barranco above San Sebastian in the island of Gomera,—one by M<sup>r</sup>

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but I have not the slightest hesitation in regarding this *habitat* as erroneous, and more particularly so since I have already had occasion to notice other instances in which a confusion has manifestly arisen through his having mixed up his material from the different islands—which was, in consequence, misquoted subsequently by Dr Heer (who prepared the Catalogue for M Hartung's volume). And this is all the more probable, inasmuch as I have received the species from Dr Heer himself (from M Hartung's collection) labelled as coming from "Teneriffe."

Gray, another by myself, and the third (more recently) by Dr Crotch. It may readily be known from the *C. obsoleta* by its much more brilliant, unalutaceous, and bright-brassy surface, by its larger and squarer prothorax being perhaps a trifle more evidently punctulated, and *very* much more deeply impressed on either side (the impression, moreover, running from the extreme base to almost the anterior margin), by its elytral punctures being smaller and rather more numerous, and by its wings (although minute and narrow) being somewhat *less* narrowed than is there the case, and likewise infuscated more decidedly throughout their entire apical portion (whereas the wings of the *C. obsoleta* are more often maculated with a cloudy spot in the middle only)

### 616 *Chrysomela gemina*

*C. ovalis*, nitidissima, vel æneo-cuprea, vel viridi-cuprea, vel ænea, vel viridi-ænea, capite parce punctulato, prothorace fere impunctato (oculo fortissime armato punctulis subtilissimis plus minus perspicuis adperso), utrinque (punctis per paucis notato) vel integro vel postice versus latera obsoletissime (plus minus perspicue) impresso, elytris parce subseriatim punctatis, seriebus alternis inter se paulo approximatis, antennis pedibusque picescentioribus

*Variat* in ins. Palma elytrorum punctis paulo majoribus — Long corp. lin. 3-5

*Chrysomela gemina* et *nitens*, Brulle, in *Webb et Berth* (Col.) 73, 74 (1838)

*Habitat* in Teneriffa et Palma, hinc inde vulgaris

Judging from the diagnoses, and taking into account the very scanty material of Messrs Webb and Berthelot which M. Brullé appears in nearly all instances to have described from, I have little doubt that the *C. gemina* and *nitens* of the latter were founded on extreme individuals of this variable *Chrysomela*, for although he speaks of the former of them as having the thorax entire, and the other as furnished with "un demibourrelet sur les côtés du corselet," it seems to me, after the inspection of 213 examples, collected in many localities widely separated from each other, that the majority of them might be said to have the prothorax "entire," though there is a *tendency* in a certain number to possess a slight longitudinal depression on either side behind, which in rare instances becomes rather decidedly expressed. And I think it is more than probable, therefore, that M. Brullé may have drawn up his diagnoses from a large and small individual, in which these differences chanced to be more than usually appreciable, and in which also the colour was respectively æneous and coppery.

The *C. gemma* has been observed hitherto only in Teneriffe and Palma, in the former of which it is rather common—occurring in many districts and at various altitudes, and attaching itself to very opposite kinds of plants. Thus, in Teneriffe it was captured by Mr Gray and myself, near the Puerto Orotava, during January 1858, almost exclusively on the *Lavandula abrotanoides*, whereas in the woods above Taganana it seems to prefer a species of *Bystropogon* (after the fashion of the curious *C. onychina* of Madeira), where I have seen bushes of that plant absolutely sparkling with it. And I have also met with it around the roots of Euphorbias on the mountain-slopes forming the northern side of the Barranco do Passo Alto, near S<sup>ta</sup> Cruz, as well as at the Agua Garcia and the Agua Mansa. My Palman specimens are from the Barranco above S<sup>ta</sup> Cruz of that island. Examples from Teneriffe have also been communicated by the Barão do Castello de Paiva and Dr Crotch, in which island it was likewise met with by my friend the late Rev W J Armitage.

### Genus 238 PHÆDON.

(Megerle) in *Dahl, Cat* 74 (1823)

#### 617 *Phædon menthæ*, n. sp.

*P.* ovale, æneum, nitidum, ubique minute et levissime punctulatum, elytris leviter substriato-punctatis, antennis (longiusculis), tibus ad apicem tarsisque plus minus pallide rufo-ferrugineis, femoribus tibusque piceis, metasterno profunde sed parce punctato.—Long corp. lin  $1\frac{3}{4}$ —2

*Chrysomela rufipes* <sup>2</sup>, *Brulle* [nec *De Geer*], in *Webb et Berth* (Col) 74 (1838)

*Habitat* in intermediis humidis Canariæ Grandis, foliis *Menthæ* gaudens

Although it does not entirely agree with his diagnosis, I think it is far from improbable that this insect is the *Chrysomela rufipes* of M. Brullé, nevertheless, since the specific title of *rufipes* was already preoccupied in the genus *Chrysomela* by De Geer, M. Brullé's name would of necessity have to be suppressed—which is the less to be regretted since I am by no means certain that the present *Phædon* is absolutely identical with his insect <sup>1</sup>.

The *P. menthæ* may readily be known by its bright-æneous, densely

\* Thus, he speaks of "le corselet obscur," which does not in the least apply to the *P. menthæ* where the entire surface is uniformly æneous and equally shining throughout. Then, he omits all allusion to the dense (though light) punctation of its whole upper surface, though, as it is his habit to avoid noticing the most distinctive features of his several species, citing those only which are common to all of the same group, I lay but little stress upon this latter circumstance.

punctulated surface, and by its antennæ (which are exceedingly elongate for a *Phædon*) and tarsi being of a more or less pallid rufo-testaceous hue. Its femora and tibiæ are piceous, though the extreme apices of the latter (and occasionally of the former also) are rather paler. I have observed it hitherto only in Grand Canary—where, during the spring of 1858, I took it abundantly from the foliage of a large *Mentha* growing in the stream at San Mateo (in the region of El Monte), and subsequently (under similar circumstances) at the edges of the small river at Teror.

### Genus 239 PHRATORA

(Chevrolat) Redt, *Fna Austr* 554 (1849)

#### 618 *Phratora vulgatissima*

*Chrysomela vulgatissima*, Linn, *Syst Nat* i ii 589 (1767)

— —, *Dufits*, *Fna Austr* iii 210 (1825)

*Phædon unicolor*, Steph, *Ill Brit Ent* iv 336 (1831)

*Habitat* Palmam, exemplar unum deprehendit W D Crotch

A single example only of this common European insect has hitherto come beneath my notice at the Canaries. It was captured by Dr Crotch in the island of Palma, during the spring of 1862. I can detect in it no appreciable difference from the ordinary type, but it is an important addition to the fauna, seeing that we have no evidence of its existence in any other of the Atlantic Groups.

## Fam. 54. GALLERUCIDÆ.

### Genus 240 CALOMICRUS.

Stephens, *Ill Brit Ent* iv 293 (1831)

#### 619 *Calomicrus Wollastoni*

*Calomicrus Wollastoni*, Parva, *Ann Nat Hist* viii 210 (1861)

*Habitat* in Teneriffa, Palma et Hierro, floribus *Cistus*um [sc *vagans* et *monspeliensis* Linn] in intermediis præcipue gaudens

This large and truly indigenous *Calomicrus*, so remarkable for its extremely pallid upper and dark under surfaces, I have captured in Teneriffe, Palma, and Hierro—where it would appear to delight especially in the flowers of the *Cistus vagans* and *monspeliensis*, between the limits of about 1500 and 3000 feet above the sea. In Teneriffe I have observed it only at the Agua Mansa, in Palma (where it was found also by Dr Crotch) chiefly in the regions occupied by the Pinals, and in Hierro, in the sylvan district of El Golfo, on the western slopes of that island.

## Fam. 55. HALTICIDÆ.

## Genus 241 HALTICA.

Geoffroy, *Hist Abi des Ins* 1 244 [script *Altica*] (1762)(Subgenus *Crepidodera*, Chev )620 *Haltica* Allardii.*Haltica* Allardii, *Woll, Journ of Ent* 1 1 (1860)*Crepidodera* Allardii, *Allard, Ann de la Soc Ent de France*, 312 (1862)*Habitat* Teneriffam, foliis *Physalidis aristatæ* circum Portum Orotavæ gaudens

This interesting little *Haltica*, so remarkable for its pubescent surface, coarsely punctured, basally-impressed prothorax, deeply punctate-striated elytra, and pallid hue (the suture and an abbreviated medial elytral fascia being alone, in normally coloured specimens, more or less dark), is closely allied to the European *H atropæ*. It is, however, a trifle smaller than that insect, and its head and prothorax are pale rufo-testaceous (instead of black), its limbs also are paler, its punctuation (although coarse) is not quite so rugose, and the dark portions of its elytra are very much narrower and less developed. Hitherto I have observed it only in the district around the Puerto Orotava in Teneriffe, where it is tolerably common during the spring months on the foliage of the *Physalis aristata*—a shrub intimately related to the *Atropa belladonna*, on which its more northern ally exclusively subsists.

621 *Haltica* lubrica, n sp

*H* subovalis, convexa, nitida, rufo-ferruginea, elytris paulo magis testaceis, capite prothoraceque minutissime et levissime punctulatis, hinc angusto angulis posticis obtusis, postice in medio levissime transversim impresso sed utrinque foveâ parvâ profundâ notato, elytris profunde striato-punctatis.—Long corp lin 1½

*Habitat* Teneriffam, exemplar unicum tempore vernali a D 1862 deprehendit W D Crotch

The present *Haltica* is a good deal allied, at first sight, to the European *H ventralis*, Illig, it is, however, a little larger, more shining, and convex, its colour is considerably darker, or more ferruginous, its prothorax is altogether narrower (especially in front), less deeply impressed at the base, and with its posterior angles more obtuse, and its elytra are somewhat more oval and more deeply punctate-striated. The unique example described from was taken by Dr Crotch in Teneriffe, during the spring of 1862.

(Subgenus *Phyllotreta*, Chev)622 *Haltica varipennis**Haltica varipennis*, Boield, *Ann de la Soc Ent de France*, 477 (1859)*Phyllotreta varians*, Foudr, *Altisides*, 248 (1860)— *varipennis*, Allard, *Ann de la Soc Ent de France*, 385 (1860)*Habitat* Teneriffam, a W D Crotch semel reperta, forsan ex alienis introducta

A single specimen of a *Haltica* which was taken by Dr Crotch, during the spring of 1862, in Teneriffe appears to me to present no differences of sufficient importance from the *H varipennis* of Mediterranean latitudes to warrant its separation therefrom. Judging from two examples of that insect which have been communicated by M Allard, the Canarian individual seems merely to be a little larger, and to have its two longitudinal testaceous elytral bands somewhat broader and more developed (so as to extend over a larger space, and to be less scooped out externally), but in its depressed, finely punctured surface and general colouring, as well as in the enlarged fifth joint of its antennæ, and in the apices of its elytra being, separately, a little rounded off, it agrees entirely with the *varipennis*.

(Subgenus *Aphthona*, Chev)623 *Haltica Parvana*.*Haltica Parvana*, Woll, *Journ of Ent* 1 2 (1860)*Aphthona Parvana*, Allard, *Ann de la Soc Ent de France*, 333 (1862)*Habitat* in Lanzarota, Canaria, Teneriffa et Hierro, foliis *Euphorbium* gaudens

This beautifully metallic species (which, however, is very variable in tint, shading off from bright cyaneous-blue into golden-green, or even into coppery-brown, whilst the tibiæ and tarsi, and sometimes the four entire anterior legs, are testaceous) is peculiar to the foliage of the various *Euphorbias*—on which I have taken it abundantly in the north of Lanzarote (where it was found also by Mr Gray), on the mountains above San Mateo in Grand Canary, near the Puerto Orotava in Teneriffe, and in the region of El Golfo on the western side of Hierro. From Teneriffe it has likewise been communicated by the Barão do Castello de Paiva, after whom the species was originally named. M Allard states concerning it, “Cette espèce est très-facile à reconnaître à sa couleur d’un vert ou bleu clair, à sa ponctuation extrêmement forte et rugueuse, et à sa forme étroite et un peu aplatie qui la rapproche de l’*A. Pourpilleri*, mhi.”

624 *Haltica plenifrons*, n sp

*H* oblongo-ovata, parum nitida, læte cyanea, capite omnino prothoraceque fere impunctatis, illo subrotundato convexo, hoc brevi transverso, postice in medio brevissime et obsolete carinato, angulis ipsissimis posticis acute et conspicue exstantibus, ad latera antice distincte sed postice (necnon per marginem posticum) vix marginato, elytris ovalibus, minute subpunctulato-rugulosis, antennis femoribusque posticis fusco-piceis, illis versus basim pedibusque anterioribus infusato-testaceis—Long corp lin  $1\frac{2}{3}$

*Habitat* Palmam, mihi non obvia, a W D Crotch semel tantum lecta

The single individual from which the above description has been compiled was taken by Dr Crotch, during the spring of 1862, in the island of Palma. In its bright-cyaneous hue it is very similar to the majority of the examples of the *H Pawana*, nevertheless it is larger and broader than that species, not quite so shining, and very much less coarsely punctured. Indeed its head and prothorax (particularly the former, which is rounded and convex) are almost unsculptured, and its elytra (although rather rugulose) are but very minutely punctulated. Its prothorax is relatively shorter and more transverse than in the *H Pawana*, with its lateral edges distinctly margined anteriorly, but (like the basal one) scarcely at all so behind, and has its extreme posterior angles more conspicuously, though minutely, prominent, and the apices of its tarsi are less evidently darkened.

625 *Haltica crassipes*

*Haltica crassipes*, Woll, *Journ of Ent* 1 3 (1860)

*Aphthona crassipes*, Allard, *Ann de la Soc Ent de France*, 331 (1862)

*Habitat* Teneriffam et Palmam, præsertim in foliis plantarum (*Sempervivum*, et cæt) ad rupes locorum editiorum crescentium

The present insect and the *Longitarsus kleimpeida* are *primâ facie* somewhat alike, nevertheless, apart from the generic characters (of the longer legs and hind feet, &c) of the latter, the *H crassipes* may be recognized by its more quadrate prothorax, stouter antennæ (which have four of their basal joints, instead of only three, more or less testaceous), and by its more finely punctured elytra. Its four anterior male tarsi have their basal joint greatly dilated, so as far to exceed the second—a structure which is more or less expressed in most of the *Halticidæ*, but which in the *H crassipes* is peculiarly conspicuous. M Allard says, “ Cette espèce a beaucoup d’analogie avec l’*A flaviceps*, mihi, cependant cette dernière est plus étroite, son prothorax et ses antennes sont plus courts et les tarses du ♂ sont moins dilates ” It is apparently rare, nevertheless I have taken it at the Agua Mansa

in Teneriffe, and from plants (I believe *Semperiva*) growing on the damp rocks in the deep sylvan ravines of Palma—especially the Barrianco da Agua, towards the north-east of that island

### Genus 242 LONGITARSUS

Latreille, *Fam Nat des Ins* 405 [script *Longitarse*] (1825)

#### 626 *Longitarsus kleimiperda*

*Longitarsus Kleimiperda*, Woll, *Journ of Ent* 1 4 (1860)

*Temodactyla Kleimiperda*, Allard, *Ann de la Soc Ent de France*, 325 (1862)

*Habitat* in Teneriffa, Gomera, Palma et Hierro, folia *Kleinia nervifoliae* destruens

This large and pallid *Longitarsus* appears to be peculiar (or nearly so) to the foliage of the *Kleinia nervifolia*, DeCand, whole plants of which I have frequently observed to be destroyed by it entirely. I have taken it abundantly in the waste cindery district above the Puerto Orotava, as well as near St Cruz and in the sylvan regions of Taganana and the Agua Garcia, in Teneriffe, in the Barrianco above St Cruz in Palma, and in the lower part of El Golfo on the western side of Hierro. In Teneriffe and Gomera it was found also by Dr Clotch. At first sight it somewhat resembles the *L tabidus* of more northern latitudes, it is, however, less convex and more strongly punctured than that species, its prothorax is less abbreviated and rather more narrowed in front, its limbs are longer, and the basal joint of its four front male feet is altogether larger and broader.

#### 627 *Longitarsus persimilis*.

*Longitarsus persimilis*, Woll, *Journ of Ent* 1 4 (1860)

*Temodactyla persimilis*, Allard, *Ann de la Soc Ent de France*, 319 (1862)

*Habitat* in Teneriffa et Hierro, foliis *Echiorum* (præsertim *E simplicis*) in subeditoribus crescentium gaudens

This beautiful *Longitarsus* is at once remarkable for its testaceous prothorax and elytra, the latter of which have a large patch on the disc of each, a smaller dash at either shoulder, and their suture (except at the extreme apex) more or less black. Its head, together with the apical half of its two hinder femora, and its antennæ (except the two or three basal joints) are either piccous or piceous-black, and its elytra are densely and coarsely punctured, and longitudinally striated—especially towards either side. It appears to be peculiar to the foliage of the various *Echna*—particularly to a gigantic species allied to the Madenan *E canbicans*, and which the Rev R

T Lowe informs me is probably the *E simpler*, on which plant I have taken it, rather abundantly, at the base of the Organo Rocks in the sylvan region of the Agua Mansa in Teneriffe. Whilst in the island of Hierro, however, during February 1858, I captured it sparingly from a smaller *Echium* (I believe the common *E violaceum*) on the hills to the westward of Valverde. In Teneriffe it was met with also by Dr Crotch\*.

### 628 *Longitarsus messerschmidtæ*.

*Longitarsus messerschmidtæ*, Woll, *Journ of Ent* 1 6 (1860)

*Tenodactyla messerschmidtæ*, Allard, *Ann de la Soc Ent de France*, 319 (1862)

*Habitat* in Teneriffa, Palma et Hierro, ad folia *Messerschmidtæ fruticosæ* hinc inde frequens

In my Paper "on the Canarian *Halticidæ*," above referred to, I said, concerning this species, "It is not without some little hesitation I regard the present *Longitarsus* as distinct from the preceding one, nevertheless, since its normal *facies* is very dissimilar, and its habits different, I think it is scarcely safe to amalgamate the two. Indeed in its *general* aspect it is so unlike the *L persimilis* that no one could ever suppose them to be identical, did not an occasional (though very rare) variety of the present insect make such a curious approach, in the arrangement of its colouring, to its ally, as to lead one to suspect that it may be but a phasis of the latter, gradually assumed through the adoption of a totally different plant for its subsistence. Still this is but conjecture, and I therefore prefer treating the two as separate. In its typical state, the *L messerschmidtæ* is, on the average, a trifle smaller and narrower than its ally, its sculpture is less deep, and it is of a uniformly pale, brownish-testaceous hue. Its elytra, however (in which case the apices of its posterior

\* The *L persimilis* very closely resembles at first sight the Madeiran *L Masoni* (= *isophaedis* olm), "nevertheless on a nearer inspection," as I stated in my Paper on the Canarian *Halticidæ*, "it possesses such a number of minor characters peculiarly its own that I cannot feel justified despite the many points of resemblance in the two insects, in regarding them as otherwise than truly distinct, though clearly members of the same geographical province. The Canarian species may be readily known from the Maden in one by its uniformly smaller size, rather shorter and more lunulate prothorax (which is a little more truncated in front and has the hinder angles more rounded off, and the sides somewhat more angulated in the middle), and by its entire sculpture, which is denser and very much more coarse, especially on the elytra (which are also more evidently striated than is the case in the *L Masoni*). Its elytra, likewise, are slightly more truncated at their apex, its whole surface is much less opaque, and its coloration is altogether a little different—its head being less black, or more piceous, its prothorax more evidently rufo-testaceous, its legs and elytra not quite so pale, and the dark portions of the latter smaller in size, &c the humeral and discal patches are reduced in dimensions, and the sutural line is equal throughout."

femora are also dark), have an occasional tendency to become clouded about their disc, suture, and shoulders, and in one or two highly coloured specimens (out of many hundreds which I possess) the discal cloud assumes the form of a well-defined patch (and even the humeral one is somewhat concentrated)—thus causing them to resemble very much the paler examples of the *L. persimilis*. Such individuals, however, are extremely scarce, and even in them the lighter sculpture prevails (as in the ordinary ones), and therefore, in spite of their *primâ facie* approach to the last species, I must regard their *connectiveness* as more apparent than real. So far as I have observed hitherto, the present *Longitarsus* is exclusively attached to the fragrant *Messerschmidia fruticosa*—on which shrub, when carefully examined, I have scarcely ever failed to detect it. Its range is consequently somewhat lower than that of the *L. persimilis*, which feeds on the *Echua* of more lofty elevations. I have taken it abundantly in the waste grounds above the Puerto Orotava, as well as between Ycod de los Vinhos and Garachico, of Teneriffe, on the rocks between the plains of Los Llanos and the Pinal, in the Banda of Palma, and a little above the sea-coast, in the district of El Golfo, on the west of Hierro.”

### 629 *Longitarsus ochroleucus*

*Chrysomela ochroleuca*, *Mshn, Ent Brit* 202 (1802)

*Thyamus ochroleuca*, *Steph, Ill Brit Ent* iv 311 (1831)

*Altica ochroleuca*, *Lucas, Col de l'Algérie*, 547 (1849)

*Tenodactyla ochroleuca*, *Allard, Ann de la Soc Ent de France*, 131 (1860)

*Longitarsus ochroleucus et cognatus*, *Wll, Journ of Ent* 1 7 (1860)

*Habitat* in Fuerteventura, Canaria et Teneriffa, minus frequens

The common European *L. ochroleucus*, so well distinguished by its small, laterally rounded, almost unsculptured prothorax, its very finely punctulated elytra, and its excessively pallid, whitish-testaceous upper surface (the antennæ alone, except the basal joints, and the apical half of the two hinder femora being dark), appears to be both local and rather scarce in these islands—into which it may very likely have been introduced from more northern latitudes. I have taken it in Grand Canary (on the mountain-slopes above San Mateo, on the ascent to the Roca del Soucilho), and also around Orotava and Sta Cruz, as well as at the Agua Garcia, in Teneriffe—in the latter of which islands it was found also by Dr Crotch.

After a more careful comparison of the specimen (captured by Mr Gray in Fuerteventura) which I described, in 1860, under the spe-

cific name of *cognatus*, I believe that it cannot be regarded as more than a slightly infuscated individual of the *ochroleucus*, in which the elytral punctures are even less conspicuous than usual, and I have therefore treated it accordingly

### 630 *Longitarsus brevipennis*.

*Longitarsus brevipennis*, Woll, *Journ of Ent* 18 (1860)

*Temodactyla brevipennis*, Allard, *Ann de la Soc Ent de France*, 320 (1862)

*Habitat* in Lanzarota, ad plantam *Heliophyti erosi* Lem, per litus arenosum crescentem prope oppidum Arrecife, April 1859, captus

Of the present *Longitarsus* I have seen but three or four examples—which were taken by myself, near Arrecife, in the island of Lanzarote, during April 1859. They were found on a plant of *Heliophytum erosum*, Lemann, growing on the loose sand behind the sea-beach, but I unfortunately lost all of them except one. The species (judging from the single type now before me) may be known by its rufo-piceous head, convex, rufo-testaceous prothorax, and short, testaceous elytra (the suture of which, particularly in the middle, is blackened). Its prothorax and elytra are finely but sharply punctulated, and its antennæ (which, like the two hinder femora, are darker towards their apex) are rather abbreviated. M. Allard, of Paris, to whom I formerly submitted it for inspection, returned it with the observation, “affinis *Temodactylæ atricapillæ* Duft., sed aliter colorata, capite et prothorace latioribus, antennis brevioribus, et cæter.”

### 631 *Longitarsus strigicollis*, n. sp.

*L. oblongo-ovalis*, nitidus, alutaceus, infuscato-testaceus, capite prothoraceque paulo rufescentioribus, parvis, hinc punctato, punctis postice subconfluentibus, fere strigas obliquas efficientibus, ad latera rotundato et grosse marginato, angulis posticis rotundatis, elytris subovalibus, sat distincte punctulatis, singulis striâ suturali impressis, antennis brevibus, versus apicem infuscatis, pedibus testaceis, femoribus posticis nigro-piceis.—Long corp. lin  $1\frac{1}{2}$

*Habitat* Teneriffam, a cl W. D. Crotch detectus

The single specimen from which the above diagnosis has been compiled was captured by Dr. Crotch in Teneriffe, during the spring of 1862. It may be known by its oblong-oval outline, brownish-testaceous hue (the apex of the antennæ, and the two posterior femora, being alone darker), by its small head and prothorax, somewhat coarsely punctured surface, and short antennæ. Its punctures have a tendency to be subconfluent on the hinder region of its prothorax—an arrangement which causes them almost to form oblique (though

very obscure) strigæ Its head is a little darker (or more rufescent) than the prothorax, and the prothorax (which is coarsely bordered at the sides) than the elytra—which last are impressed (particularly behind) with a rather evident sutural stria

### 632 *Longitarsus nubigena*

*Longitarsus nubigena*, Woll, *Ins Mad* 447 (1854)

— —, *Id*, *Cat Mad Col* 133 (1857)

— —, *Id* *loc cit* 8 (1860)

*Teinodactyla nubigena*, Allard, *Ann de la Soc Ent de France*, 329 (1862)

*Habitat* in Teneriffa et Gomera, in illâ a Dom Crotch sed in hac a Dom Gray et meipso semel captus

The brownish-testaceous hue and coarsely sculptured surface of this rather insignificant *Longitarsus*, which has its prothorax transverse-quadrate (the sides being nearly straight), and its elytral punctures somewhat large and closely packed together and with a slight tendency to be arranged in longitudinal rows, will sufficiently distinguish it from its allies M Allard states concerning it, “il a beaucoup d’analogie avec la *T bruniceps*, mihi, dont il diffère principalement en ce qu’il est ferrugineux en dessous et non pas noir” A single specimen of it was taken by Mr Gray, near San Sebastian, in Gomera, at the beginning of February 1858, a second (which differs, however, in being rather paler, and in having its prothorax perhaps a trifle less abbreviated and with the lateral margin less thickened, but which I believe to be an immature example of the *nubigena*) was found by Dr Crotch in Teneriffe, during the spring of 1862, and I myself met with a third, in Teneriffe, during May of 1859\* It occurs likewise, though sparingly, in Madeira

### 633 *Longitarsus dorsalis*

*Chrysomela dorsalis*, Fab, *Mant Ins* 1 77 (1787)

*Thyamis dorsalis*, Steph, *Ill Brit Ent* iv 315 (1831)

*Teinodactyla dorsalis*, Allard, *Ann de la Soc Ent de France*, 104 (1860)

*Longitarsus dorsalis*, Woll, *loc cit* 8 (1860)

*Habitat* Lanzarotam borealem, in graminosis herbis circa oppidum Hania, tempore vernali haud infrequens

The only region in these islands in which the European *L dorsalis* has (so far as I am aware) been observed is the north of Lanzarote—where it was captured, during January 1858, by Mr Gray and myself (and subsequently, by myself, in March of 1859), around Hania The dark colour of its head, broad sutural stipe, and two

\* The last of these is of a rather darker hue, and has the hinder disc of each elytron, as well as its two posterior femora, piceous

hinder femora, whilst the prothorax and the remainder of the elytra and limbs are pale testaceous, will, apart from minor features, sufficiently distinguish it. It is recorded also from the north of Africa.

### 634 *Longitarsus pusillus*

*L. oblongo-ovalis*, nitidus, capite prothoraceque rufo-piceis (hoc pallidior), elytris pallide infuscato-testaceis, prothorace brevi, transverso, ad latera marginato, angulis posticis subrotundato-obtusis, obsolete punctulato, tenuiter canaliculato necnon postice subinæquali, elytris distinctius et parum dense punctulatis, antennarum pedibusque testaceis, illis versus apicem femoribusque posticis paulo obscurioribus — Long corp. lin. vix 1

*Haltica pusilla*, *Gyll., Ins. Suec.* iii 549 (1813)

*Thyamis pusilla*, *Steph., Ill. Brit. Ent.* iv 313 (1831)

*Tenodactyla pusilla*, *Allard, Ann. de la Soc. Ent. de France*, 125 (1860)

*Habitat* Teneriffam, a W. D. Crotch semel deprehensus

I cannot detect any differences of sufficient importance in the single (and rather immature) example from which the above diagnosis has been compiled (and which was captured by Dr. Crotch in Teneriffe) to warrant the supposition that it is specifically distinct from the common European *L. pusillus*, for although the punctuation of its elytra is just perceptibly stronger, and that of its prothorax perhaps even somewhat still finer, than is the case in the ordinary northern type, yet such characters are so trifling in a group so essentially variable as *Longitarsus* that I cannot attach any weight to them at all. Moreover its prothorax is a little less convex (or more uneven), and has its central canal better expressed, but this likewise is very unimportant, and may possibly (as the specimen is ill-developed) be merely accidental, so that I have but little hesitation in identifying it as above.

### 635 *Longitarsus inconspicuus*

*Variat* vel omnino vel fere infuscato-testaceus, vel dilute piceus elytris vix magis testaceis — Long. corp. lin.  $\frac{3}{4}$ –vix 1

*Longitarsus inconspicuus*, *Woll., loc. cit.* 9 (1860)

*Tenodactyla inconspicua*, *Allard, Ann. de la Soc. Ent. de France*, 317 (1862)

*Habitat* Teneriffam, in elevatis parce degens

Four specimens only, captured by myself in Teneriffe, of this insignificant little *Longitarsus* have as yet come beneath my notice. Two of them were taken at the Agua Mansa, a third on the ascent to the Cumbre above it, and the remaining one on the mountains above Taganana. It would seem therefore to be an insect of inter-

mediate and lofty elevations According to M Allard, it is a good deal allied to the European *L thoracicus*, Steph, from which it appears, mainly, to recede in its smaller size, more elliptic outline, different colour, and coarser punctation

### 636 *Longitarsus vilis*, n sp

*L fusco-piceus*, nitidus, subdepressus, prothorace parvo, subconico-transverso, postice recte truncato, minute et levissime punctulato, elytris subovalibus, antice facile angustioribus, distinctius (sed minute) et parum dense punctatis, antennis (breviusculis) pedibusque plus minus piceo-testaceis, illis versus apicem et præsertim femoribus posticis picescentioribus—Long corp ln vix l

*Habitat* in Canaria et Teneriffa, parum rarus

This ordinary-looking little species has much the (brownish-piceous) colour of the common European *L luridus*, nevertheless it is considerably smaller and less convex than that insect, its prothorax is rather smaller, and a little more laterally-compressed in front (giving it a more conical appearance from above), its elytra are less dilated in the middle and more regularly narrowed towards the shoulders, and its entire punctation is both finer and denser I took a single example of it in Grand Canary, during the spring of 1858, and four more were captured by Dr Crotch in Teneriffe in 1862

### 637 *Longitarsus fuscoæneus*

*Longitarsus fuscoæneus*, Redt, *Ena Austr* 535 (1849)

*Temodactyla fuscoænea*, Allard, *Ann de la Soc Ent de France*, 92 (1860)

*Longitarsus fuscoæneus*, Woll, *loc cit* 9 (1862)

*Habitat* Fuedeaventuram et Teneriffam, in foliis *Echrorum* degens

The European and North-African *L fuscoæneus* occurs sparingly at the Canaries—on the leaves of the *Echrum violaceum*, L It was taken by Mr Gray in Fuedeaventura, and by myself on the mountains above Sta Cruz, as well as at the Agua Garcia, in Teneriffe—in which latter island it was found subsequently by Dr Crotch

### 638 *Longitarsus echu*

*Haltica Echu*, Illig, *Mag fun Ins* vi 171 (1807)

*Longitarsus excuvus*, Woll, *Cat Mad Col* 133 (1857)

*Temodactyla Echu*, Allard, *Ann de la Soc Ent de France*, 90 (1860)

*Longitarsus Echu*, Woll, *loc cit* 9 (1860)

*Habitat* in Canaria, Teneriffa, Gomera et Palma, in locis similibus ac præcedens

This *Longitarsus*, which is widely spread over central and southern

Europe, and which occurs also in the north of Africa and at the Madeiras, is found sparingly in these islands, chiefly in company with the last species. I have taken it from the *Echium violaceum*, near San Mateo, in Grand Canary, as well as at the Agua Garcia in Teneriffe, and it was found by Mr Gray in Gomera and Palma. In Teneriffe it was met with likewise by Dr Crotch. It has much the general aspect and colouring of the *L. fuscoarvens*, but is considerably larger and more coarsely punctured, it has often (in addition to the normal brassy one) a greenish or bluish tinge, and the extreme apices of its elytra are less obtuse (or separately rounded off).

### Genus 243 PSYLLIODES

Latreille, *Fum Nat des Ins* 405 [script *Psyllode*] (1825)

#### 639 *Psyllodes hospes*

*Psyllodes hospes*, Woll, *Ins Mad* 449 (1854)

— —, *Id*, *Cat Mad Col* 134 (1857)

— —, Allard, *Ann de la Soc Ent de France*, 340 (1860)

— —, Woll, *loc cit* 10 (1860)

*Habitat* insulas omnes Canarienses, in herbis vulgaris

The present *Psyllodes*, which is universal throughout the Madeiran archipelago, is equally universal at the Canaries—in the whole seven islands of which I have myself captured it, more or less abundantly. In Lanzarote, Gomera, and Hierro it was found also by Mr Gray. Its brassy-green, densely punctured surface, less convex body, small prothorax, and testaceous legs (and base of antennæ), the two hinder femora being alone infuscated, will sufficiently distinguish it. It is particularly partial to the foliage of plants of the *Sinapis*-group, and would seem to be the representative of the *P. cuprea* of more northern latitudes. Indeed M. Allard observed concerning it, "*Psyll cuprea* Ill affinis, et ut illa in elytris punctato-striata, sed differt interstibus punctulatis, prothorace ad latera minus recto, et cæt."

#### 640 *Psyllodes vehemens*

*Psyllodes vehemens*, Woll, *Ins Mad* 451 (1854)

— —, *Id*, *Cat Mad Col* 134 (1857)

— —, Allard, *Ann de la Soc Ent de France*, 341 (1860)

— —, Woll, *loc cit* 10 (1860)

*Habitat* insulas omnes Canarienses, passim

The *P. vehemens*, which, like the last species, is universal in the Madeiran Group, is likewise universal at the Canaries,—Gomera (where however it was taken by Dr Crotch, during the spring of 1862) being the only island of the seven in which I have not myself

captured it. In Fuerteventura, Tenerife, and Palma it was found also by Mr Gray. As in the neighbouring archipelago, it is extremely variable in hue—being sometimes entirely testaceous, at others with the prothoracic disc and the suture dark, whilst in highly-coloured individuals nearly the whole of the prothorax and a large portion of the elytra are blackened. The *generality* of the Canarian specimens, however, are altogether pale, like the Porto-Santan ones,—the darker states, which are the rule rather than the exception in Madeira proper, being comparatively rare in these islands. M. Allard writes, of the *P. vehemens*, “Cette belle espèce ressemble beaucoup au *P. cassioides*, Faum., mais son conspéc. est un peu plus court et plus étroit, la ponctuation des élytres est plus forte, et la coloration est différente.”

#### 641 *Psylliodes stolida*

*Psylliodes stolida*, Woll., *loc. cit.* 11 (1860)

— — —, Allard, *Ann. de la Soc. Ent. de France*, 340 (1860)

*Habitat* Lanzarotam et Fuerteventuram, foliis *Mercurialis annuæ* gaudens

This small *Psylliodes*, which is of a brownish-piceous hue with more or less of an obscure brassy or even greenish tinge, and the prothorax of which is convex, delicately alutaceous, and studded with very minute and shallow punctules, is peculiar, so far as observed hitherto, to Lanzarote and Fuerteventura—in the former of which it was captured by Mr Gray and myself, on the common *Mercurialis annua*, during January 1858, around Haria (in which locality I again met with it in the spring of the following year), whilst, in the latter, I took it sparingly, at the end of March 1859, at Oliva.

#### Genus 244 **DIBOLIA**

Latreille, *Regne Anim.* v. 139 (1829)

#### 642 *Dibolia obtusa*, n. sp.

*D. oblonga*, nitida, ubique parce punctulata, nigra, capite prothoraceo (subconico) distincte sed elytris vix ænescentibus, punctis in elytris subseriatim dispositis, antennis ad basin, pedibus anterioribus et tibus tarsisque posticis rufo-testaceis.—Long. corp. lin. vix  $1\frac{1}{2}$

*Habitat* Fuerteventuram, tempore vernali a n. 1859 exemplar unicum collegi

Of the present *Dibolia* a single example was captured by myself in Fuerteventura (I believe, in the Rio Palmas), during the spring of 1859. It is unquestionably distinct from *five* of the European species of which M. Allard has kindly communicated types, though per-

haps nearer in size and sculpture to the *D. occultans* than to any of the remainder. It is, however, a little larger and more oblong than that insect, its colour (instead of being cyaneous) is of an obscure brassy-black, and its four anterior legs and two hinder tibiae and feet are bright rufo-testaceous.

#### Genus 245 **CHÆTOCNEMA.**

Stephens, *Ill Brit Ent* iv 325 (1831)

#### 643 **Chætocnema tarsalis.**

*Chætocnema tarsalis*, Woll, *loc cit* 11 (1860)

*Plectioscelis tarsalis*, Allard, *Ann de la Soc Ent de France*, 337 (1860)

*Habitat* Canariam Grandem, in gnammosis ad Arguinicum, per marginem paludis ejus juxta mare sitæ, April A D 1858, reperiæ

The *primæ facie* aspect of this *Chætocnema* is almost identical with that of the common European *C. aridella*, except that it is a little more æneous and shining, with its prothorax somewhat more truncated (or less produced) behind, and with the intermediate joints of its antennæ rather slenderer, and it was not until I had closely overhauled it that I detected a *structural* character which will at once separate it from its more northern ally. This consists in the formation of its tarsi, which are very much narrower and more elongated than those of the *aridella*, with their apical joint particularly (as compared with the corresponding one in that species) long and slender. The penultimate one, also, is less dilated than is there the case, and the whole foot has a different appearance. It was detected by myself, on the 14th of April 1858, at Arguinicum, in the south of Grand Canari, where I obtained several specimens by brushing the short grass at the edges of the small freshwater lake immediately behind the sea-beach.

### Fam. 56. **HISPIDÆ.**

#### Genus 246 **HISPA.**

Linnaeus, *Syst Nat* (1766)

#### 644 **Hispa occator.**

*H* species *H. testaceæ* simillima, sed paulo major, elytris ad apicem minus truncato-decurvis, et aliter colorata. Supra pallidior, testacea (nec rufo-ferruginea) pilisque longioribus demissis magis anreis vestita, prothorace postice, scutello, suturâ tarsisque, necnon infra (in meso- et meta-sternis abdomineque) plus minus nigrescentibus (nec concoloribus), elytrorum spinis e nodulis submajoribus ac latius nigris singulatim surgentibus.—Long corp lin 2-3

*Hispa occator*, Brullé, in *Webb et Berth (Col)* 73 pl 1 f 17 (1838)

*Habitat* in montibus excelsis Teneriffæ et Palmæ, præsertim ad folia *Cistorum* in pinetis crescentium, hinc inde vulgarissima

Whether this insect should be regarded as a geographical modification of the *H testacea* of southern Europe, I will not undertake to pronounce for certain, but as it has already been erected into a species by M. Brulle, and it does undoubtedly possess certain differential characters (though perhaps not very important ones) which essentially separate it therefrom, I do not think it desirable to treat it as a mere variety. It is, on the average, a little larger than the *H testacea*, its elytra are less suddenly drawn in, or truncated, behind, and it is clothed with a rather coarser decumbent golden pile, the colour also of its upper surface is paler, or more testaceous (instead of being rufo-ferruginous), but nevertheless the posterior region of its prothorax, as well as its scutellum and suture, are more or less darkened. The tubercles, likewise of its elytra, from which the spines arise, are blacker and (if anything) somewhat larger, and the under segments of its body—at least the meso- and meta-sterna and abdomen—are, together with the feet, also blackish.

The *H occator* abounds in certain districts of a rather high elevation in Teneriffe and Palma, occurring more particularly in the various Pinals (which are frequently difficult of access), and attaching itself to the foliage of the shrubby *Cisti* (the *C. vagei*, s and *monspeliensis*) which characterize those altitudes. In such situations I have taken it at the Agua Mansa, and above Ycod el Alto, in Teneriffe, as well as throughout the immense Pinal, of Palma, extending down the western slopes of the mountain-range above St Cruz and Buenavista, and occupying the extensive tract of country between the Banda and the edges of the Great Caldera. Teneriffan specimens have also been communicated by the Barão do Castello de Paiva.

## Fam. 57. CASSIDIDÆ.

### Genus 247 CASSIDA

Linnaeus, *Syst Nat* 1 (1735)

### 645 Cassida hemisphærica

*Cassida hemisphærica*, *Hbst, Kaf* viii 226 (1790)

— —, *Lucas, Col de l'Algerie*, 514 (1849)

— —, *Holl, Ins Mad* 440 (1854)

— —, *Id, Cat Mad Col* 130 (1857)

*Habitat* in Canaria, Teneriffa, Palma et Hicno, passim

The European *C hemisphærica*, which occurs sparingly at Madena, is widely spread over these islands, where very probably it is universal

Hitherto, however, I have observed it only in Grand Canary (throughout the region of El Monte), Teneriffe (at Souzal and about Orotava), Palma (at the Banda), and Hierro. In Teneriffe it was found also by the late Rev W J Aimitage, the Barão do Castello de Paiva, and Dr Crotch, and in Palma by Dr Crotch and Mr Gray. I have once or twice met with it rather abundantly amongst the mulberry-leaves, in houses on which silkworms are fed.

## Fam. 58. EROTYLIDÆ.

### Genus 248 XESTUS (nov. gen.)

*Corypus* sat parvum, ellipticum, calvum, *Thoraci* formam primâ facie simulans capite exserto prothorace subconico, apice truncato, basi trisinuato, angulis posticis productis, *prosterno* apice truncato, postice inter coxas anticas parallelo et leviter producto necnon ad basin paulo emarginato scutello sat magno, transverso-scutiformi abdomine e segmentibus 5 composito. *Antennæ* 11-art<sup>æ</sup>, robustæ, parum clavatæ, mox ante oculos sub margine capitis insertæ et inter otium sub margine prothoracis (sed haud in foveis) repositæ, art<sup>ibus</sup> 1<sup>mo</sup> et 2<sup>do</sup> brevibus, 3<sup>to</sup> longiusculo 4<sup>to</sup> ad 8<sup>um</sup> latitudine vix crescentibus, reliquis clavam laxam perfoliatam haud abruptam 3-articulatam efficientibus (9<sup>no</sup> poculiformi, 10<sup>mo</sup> magis transverso, ult<sup>imo</sup> subgloboso). *Labium* submembranaceum, transversum, apice vix emarginatum angulis anticis rotundatis ciliatis. *Mandibulæ* apice valde incurvæ, uncinatæ, acutæ infra unicum denticulo armatæ, et mox infra hunc valde pubescentes membranaceæ. *Maxillæ* bilobæ, lobis brevibus, pubescentibus *interno* apice incurvo, uncinato. *Palpi maxillares* art<sup>ibus</sup> 1<sup>mo</sup> elongato subcylindrico, 2<sup>do</sup> et 3<sup>to</sup> brevioribus crassioribus subpoculiformibus, ult<sup>imo</sup> maximo securiformi. *labiales* art<sup>ibus</sup> 1<sup>mo</sup> flexuoso, 2<sup>do</sup> multo latiore sed vix longiore, ult<sup>imo</sup> magno subsecuriformi. *Mentum* elongato-quadratum, apice late sed leviter emarginatum et (nisi fallor) dente medio brevi instructum. *Ligula* membranacea, subquadrata, apice paulo emarginata, angulis anticis rotundatis ciliatis. *Pedes* crassi, ad basin leviter distantes *tibis* ad apicem externum oblique truncatis ciliatis, ad internum calcaribus minutis vix observandis terminatis *tarsis* 5-art<sup>ibus</sup>, subtus longe ciliatis, art<sup>ibus</sup> 1<sup>mo</sup> 2<sup>do</sup> et 3<sup>to</sup> longitudine subæqualibus, 3<sup>to</sup> supra excavato 4<sup>um</sup> minutum recipiente, ult<sup>imo</sup> longiusculo *unguibus* simplicibus munito.

A *Xestods*, calvus.

The affinities of the curious insect from which the above generic details have been compiled are by no means clear: nevertheless, after a careful consideration of its several parts, I am induced to think that it has perhaps more in common with the European *Aulacochilus* than with any other form with which I am acquainted—its oral organs and feet being not very dissimilar from those which obtain in that

group Nevertheless, in its external *facies*, elliptic outline, and the produced hinder angles of its prothorax, it is so curiously suggestive of a gigantic *Thioscus*, that at first I could scarcely resist the conviction that it must at least belong to the same *family* as the latter, though, in reality, its exposed head (consequent on the fact of its pronotum and prosternum being, both of them, truncated anteriorly), its freedom from under-grooves for the reception of its antennæ when laid back in a state of repose, not to mention innumerable differences, of primary signification, in its various structural *minutæ*, will at once remove it, on a closer inspection, from the *Thioscule*

#### 646 *Xestus throscoides*, n sp

X ellipticus, nitidus, calvus, piceo-niger, capite prothoraceque paulo obscurioribus (evidentius subtilissime alutaceis) et argute punctulatis, illo paulo rufescentiore, hoc (saltem in disco) convexo, ad latera et distinctius per marginem trisinuatum posticum (præsertim in lobo medio) marginato, elytris in disco convexis mox pone basin obsolete subangulatis laticibus inde ad apicem (rufo-ferrugineum) regulariter acuminatis, leviter striato-punctatis, interstitiis vage minutissime punctulatis, antennis pedibusque rufo-testaceis —Long corp lin 2-2½

*Habitat* in laucetis humidis Teneriffæ, in montibus supra Taganana ad fungos necnon etiam sub cortice arborum laxo putrido paucissime captus

Not to mention its Throscoideous contour already alluded to, the piceous-black surface of this singular insect, which has its limbs and the apex of its elytra alone more or less rufo-ferruginous, in conjunction with its sharply punctulated head and prothorax (the latter of which is margined along its obliquely-straight sides and trisinuated basal edge—particularly in the centre), and its lightly striate-punctate, apically-acuminated elytra, will prevent its being confounded with anything else with which we have here to do It appears to be of the greatest rarity and of fungivorous habits—the few specimens which I have seen (eleven in number) having been captured by myself, in Teneriffe, during May of 1859, from within *fungi*, in the damp and elevated laurel-woods which clothe the mountains above Taganana and Point Anaga, as well as from beneath the loosened putrid bark of trees, under which minute Cryptogams were more or less evident

### Fam. 59. COCCINELLIDÆ.

#### Genus 249 COCCINELLA

Linnaeus, *Syst Nat* edit 1 [script *Coccionella*] (1735)

647 *Coccinella 7-punctata*

- Coccinella 7-punctata*, *Linn*, *Fna Suec* 477 (1761)  
 ———, *Brulle*, in *Webb et Berth* (*Col*) 74 (1838)  
 ———, *Woll*, *Ins Mad* 462 (1854)  
 ———, *Id*, *Cat Mad Col* 136 (1857)  
 ———, *Hartung*, *Geolog Verhålln Lanz und Fuent* 141, 142

*Habitat* insulas omnes Canarienses, vulgaris

This common and widely spread insect, which is universal in the Madeiran Group, is universal also at the Canaries—in the whole seven islands of which I have myself captured it. In Lanzarote and Fuerteventura it was taken likewise by M. Hartung, in Teneriffe by the late Rev. W. J. Armitage, the Barão do Castello de Paiva, and Dr. Crotch, in Gomeira by Dr. Crotch, and in Palma by Mr. Gray. It is called by the inhabitants "San Antonio."

648 *Coccinella Miranda*, n. sp.

*C. rotundato-ovalis*, capite prothoraceque nigris, illo maculis duabus frontalibus pallido-flavis ornato, hoc brevi lato transverso, antice et ad latera (grosse marginata) anguste sed ad angulos anticos profunde et quadrate pallido-flavo, elytris vel flavis, vel pallido-flavis, grosse marginatis, ad humeros obtuse rotundatis, lineâ suturali hastiformi (a scutello nigro fere ad apicem ducta, sed gradatim angustiore) et singulis plagis duabus elongatis arcuatis [unâ sc. in disco antico, longitudinali, et altera brevior subtransversâ pone discum posticum] nigris, antennis pallido-testaceis pedibus nigris, tarsis dilutionibus.

*Variat* elytrorum plagis plus minus latioribus, plaga anticâ elongatâ vel antice vel postice in lineam suturalem continuata necnon intermedium macula parva media sublateralis auctâ.

*Variat*  $\beta$  [an species distincta?] Elytra magis rufescentia, lineâ suturali ad scutellum vix sed in medio sensim latiore necnon usque ad apicem ipsissimum ductâ, plaga longitudinali anticâ in maculas parvas late fracta et alterâ laterali subrotundata (nec sublateralis elongata) aucta, plaga transversa postica fere evanescente, 1 c. in maculas minutas 3 vel 4 fracta.—Long. corp. lin.  $1\frac{1}{4}$ – $2\frac{1}{3}$ .

*Coccinella hieroglyphica*, *Brulle* [nec *Oliv*], in *Webb et Berth* (*Col*) 74 (1838).

*Habitat* Canariam, Teneriffam, Gomeiram et Palmam, in intermediis et elevatis degens, usque ad 9000' s. m. ascendens.

The present *Coccinella* has much the *primâ facie* appearance of the European *C. hieroglyphica*, nevertheless, when closely inspected, it will be found to be abundantly distinct. Thus, in addition to its markings (both dark and light ones), which are differently shaped, it is rounder and broader in outline and its edges are more coarsely margined, its prothorax particularly is wider and more transverse, its humeral angles are rounder, or more obtuse, and its legs are

rather slenderer. In its markings it is, like most of the *Coccinellidae*, extremely variable, but *normally* it may be described as having its prothorax (which is more constant than the elytra) narrowly edged along its front and lateral margins with pale straw-yellow, of which colour there is a larger subquadrate spot (confluent with the border) at each anterior angle. The elytra are yellow, with a long hastate stripe down the suture (reaching from the scutellum, where it is broad, and gradually narrowing to almost the extreme apex) and two arcuated ones on each elytron (one of which is longitudinal and down the fore disc, whilst the other is transverse and placed between the hinder disc and the apex) black. And there is frequently a small, additional, sublateral dash about the middle of the outer edge of the anterior curved band.

The *C. Muanda* is widely spread over the archipelago, where (though we did not happen to observe it in Hierro) it is almost certainly universal throughout at any rate the central and western islands. It occurs at intermediate and lofty elevations, and is perhaps more abundant in the latter than in the former—ascending to an altitude of at least 9000 feet above the sea. I have taken it on the hills above San Mateo, on the ascent to the Roca del Soucilho, in Grand Canary, from the blossoms of the Retama on the lofty Cumbie, of Teneriffe, above Ycod el Alto and adjoining the Cañadas, as well as on the opposite Cumbie above the Agua Mansa and at the Agua Mansa itself, and in the Barrianco above Sta Cruz in Palma. It was first detected by Mr Gray, who met with three specimens of it in the valley above San Sebastian in Gomera, during our short visit to that island in his yacht “the Muanda” early in February of 1858, and I am glad to commemorate our pleasant sojourn in that admirable little vessel by the adoption of the above specific name. Mr Gray likewise captured it, a short time afterwards, in Palma, and it has subsequently been found in that island, Gomera, and Teneriffe by Dr Crotch.

#### 649 *Coccinella* Doublieri

*Hamonia* Doublieri, *Muls., Securyp de France*, 118 (1846)

*Habitat* Fuerteventuram, in foliis *Tamariscus gallice* depichensa

Although I have no type for comparison, I have little doubt, judging from the description, that the present small *Coccinella* is conspecific with Mulsant's *C. Doublieri*, which is said to occur on Tamarisks in the south of France. The only Canarian examples (thirteen in number) which I have seen were captured by myself

from the bushes of *Tamarix gallica*, a short distance below the town of Betancuria, in the Rio Palmas of Fuerteventura, at the beginning of April 1859. The species may be known by its small size and pale yellow surface, which has often a slightly roseate hue, and which is ornamented with numerous black patches and spots, arranged as follows—two on the forehead, seven on the prothorax, and nine on each elytron. These last are placed somewhat thus (1) subhumeral and comparatively elongate, being produced obliquely in the direction of the suture, (2) rounded and subbasal, midway between the humeral one and the suture, (3) rounded, submedial, and sublateral, (4) close to, and a little larger than, the last, and likewise submedial, but further removed from the lateral margin, (5 and 6) a little further behind than the last two, but nearer the suture and united so as to form a semicircle with its convexity turned towards the apex, and in highly coloured examples having a brownish line arising from the inner extremity of the curve and produced backwards for a considerable distance, almost parallel to the suture and towards the scutellum, (7, 8, and 9) subapical, and equidistant from each other, the central one being the longest of the three, and the inner one the roundest\*

Genus 250 **CHILOCORUS**

Leach, *Edinb. Encycl.* xv. 116 (1815)

650 **Chilocorus tenipustulatus**

*Coccinella tenipustulata*, Scriba, *Journ.* 276 (1790)

— *Cacti*, *Mshin*, *Ent. Brit.* 163 (1802)

*Chilocorus tenipustulatus*, Steph., *Ill. Brit. Ent.* iv. 374 (1831)

— *Muls.*, *Sceurip. de France*, 168 (1846)

*Habitat* insulas omnes Canarienses, præsertim in apricis infestioribus, hinc inde vulgares.

This common European insect is universal throughout the Canarian archipelago, where it occurs principally in low and hot situations, and is particularly partial to the *Opuntia tuna* (or Prickly Pear), as also to the *Plocama pendula*. I have taken it in Grand Canary, Teneriffe, Gomera, and Hiciro, in which last island, as well as in Lanzarote and Palma, it was found by Mr Gray. In Teneriffe it was likewise captured by the late Rev W J Armitage and Dr Crotch, and in Gomera by Dr Crotch, whilst from Fuerteventura it has been com-

\* There is a *Coccinella* included by M Brulle in his short and inaccurate catalogue in MM Webb and Beathelot's gigantic work, under the title of '*C. tenipustulata* Oliv.', but to what it can possibly refer I have no means of ascertaining, inasmuch as he gives (as usual) no single observation concerning it—except indeed 'France du midi de l'Europe.'

municated by the Barão do Castello de Paiva My own Teneriffan specimens are principally from the vicinity of S<sup>ta</sup> Cruz and the hills above it, Taganana, and Orotava

### Genus 251 **EPILACHNA**

Cheviolat, *Diet Univ d'Hist Nat* iv 43 (1844)

#### 651 *Epilachna 4-plagiata*, n sp

*E* nitida, oculo fortissime armato minutissime et parce punctulata necnon (saltem in prothorace elytrorumque limbo) subtilissime pubescens, rufo-testacea, capite, prothoracis disco (linea media interdum excepta) elytrorumque marginibus angustissimis et maculis parvis duabus in singulis positus plus minus nigrescentioribus elytris tenuiter marginatis, ad humeros rotundatos latis, prothorace multo latioribus — Long corp lin  $1\frac{1}{2}$ — $1\frac{1}{2}$

*Habitat* in aridis arenosis Fuerteventura, rarissima

The almost imperceptibly punctulated, rufo-testaceous surface of this species, which has its head and prothoracic disc more or less blackened, or infuscated, as well as two small spots, or dashes (one anterior, and the other posterior), on each of its elytra darker, will sufficiently distinguish it The latter (which are considerably broader at their base than the prothorax) have their humeral angles pointed and very obtusely rounded, and their suture and outer margins are most narrowly black The only three specimens which I have seen were captured by myself in the arid, sandy district at Conalejo, in the extreme north of Fuerteventura, during the spring of 1859

#### 652 *Epilachna bella*, n sp

*E* nitidissima, paulo distinctius (sed tamen minutissime) punctulata necnon (saltem in prothorace elytrorumque limbo) subtilissime pubescens, nigra, prothoracis lateribus elytrorumque margine laterali ab humeris usque ad medium et maculis duabus magnis subconfluentibus in singulis positus, rufo-testaceis, elytris sat grosse marginatis, rotundationibus, ad humeros rotundatos prothorace parum latioribus — Long corp lin  $1\frac{1}{2}$ — $1\frac{1}{2}$

*Habitat* Canariam Grandem, in arenosis ad Maspalomas capta

The black and very shining upper surface of this *Epilachna*, which has the edges of its prothorax, and half of the lateral margins of its elytra (i. e. from either shoulder to about the middle) as well as two large subconfluent patches on the disc of each of the latter, rufo-testaceous, will serve to characterize it Although very minutely so, it is rather more evidently punctulated than the *E 4-plagiata*, and its elytra are more rounded at the sides (and therefore not so immensely wider at their extreme base than the prothorax) and are also more

coarsely margined The unique example from which the above diagnosis has been compiled I captured in the sandy region at Maspalomas, in the extreme south of Grand Canary, during April 1858

### 653 *Epilachna* 10-plagiata

*Scymnus* 10-plagiatus, *Woll, Cat Mus Col* 137 (1857)

*Habitat* in Teneriffa et Palma, rarissima

The present little *Epilachna* may at once be known from both of the preceding species by the comparatively long and coarse silvery pile with which it is clothed, by the more porrect anterior angles of its prothorax, and by its surface being more deeply punctured, and black,—the elytra alone having five rufo-testaceous spots on each of them It appears to be rare, occurring sparingly at low and intermediate elevations I have taken it near S<sup>ta</sup> Cruz and at Las Mercedes in Teneriffe, as also in the Barranco above S<sup>ta</sup> Cruz in the island of Palma It occurs likewise in Madeira, where, however, it is extremely scarce

### Genus 252 SCYMNUS

Kugelann, in *Schneid Mag* 515 (1794)

### 654 *Scymnus canariensis*, n sp

*S* rotundato-ovalis, nitidus, minutissime punctulatus, cinereo-pubes-cens, niger, elytris vel rufis vel rufo-testaceis, sed in parte magna triangulari basali, sutura, macula centrali in disco postico singulorum posita necnon in margine laterali ab humeris etiam ultra medium ductâ et dein in curvâ obscura (interdum obsoleta) nebulosa usque ad suturam, sed mox ante apicem ejus, oblique continuatâ, nigris, pedibus testaceis, plus minus infuscatis

*Mas* capite et prothoracis lateribus plus minus testaceis

*Var*  $\beta$  Elytris singulis in disco immaculatis

*Var*  $\gamma$  *nigripennis* [an species?] Sensim distinctius punctulata, elytris in parte basali triangulari, suturâ et in medio marginis lateralis solum nigris—Long corp lin 1-1 $\frac{1}{2}$

*Habitat* insulas omnes Canarienses, vulgaris

This most inconstant *Scymnus* is abundant throughout the Canarian archipelago, in the whole seven islands of which I have myself captured it In Lanzarote, Gomera Palma, and Hierro it was found also by Mr Gray, and in Teneriffe, Gomera, and Palma by Dr Crotch It varies a great deal in bulk, and is usually smaller in exposed arid districts than elsewhere In its normal state it may be described as black with rufous elytra—the latter, however, being ornamented with a large triangular region at the base, then suture (to almost its extreme apex), a central spot on the hinder disc of each, and about

two-thirds of the lateral margin (namely, from either shoulder to *beyond* the middle—at which latter point the line curves inwards, nearly parallel to the elytral margin itself, and joins the sutural stripe at its extremity, *i. e.* immediately before the apex), all of which are black. One of its principal *aberrations* is that indicated above (var  $\beta$ ), in which merely the discal spot of each elytron is entirely absent (the apical fascia remaining, at the same time, strongly expressed). *All* the examples which I have as yet observed in Hierro belong to this particular state, and I may add that hitherto I have not detected it in any of the other islands of the Group. In Palma, on the contrary, the greater number of the specimens are highly decorated, the discal patch being frequently *enlarged* so as to coalesce with either the sutural or lateral stripe (or even with both of them). In the phasis var  $\gamma$  its elytral markings are still further reduced—not merely the discal patch being absent but also the subapical cloud-like fascia, and the whole of the marginal line except a small portion of it about the middle. This variety is usually a trifle more coarsely punctulated and may perhaps be universal throughout the archipelago—though the examples before me are merely from Fuerteventura, Grand Canary, Teneriffe, Gomera, and Palma.

The *S. canariensis* is most closely allied to the Madenan *S. Durantæ*, nevertheless it descends to a very much smaller bulk, and the head, which in that species is pale in both sexes, is in the Canarian one testaceous in the males only. The *S. Durantæ*, also, is a trifle more densely and coarsely punctulated, and the dark patch on the posterior disc of each elytron is usually composed of *two, confluent* ones—thus assuming the form of a fascia, and breaking up the rufous space so as to cause the latter to have somewhat the *primæ facie* appearance of two detached reddish spots.

#### 655 *Scymnus oblongior*, n. sp.

*S. præcedenti similis, sed paulo minor, oblongior, sensim minus convexus minusque crebre punctulatus, elytris pallidioribus (testaceis), singulis macula parva obscura secunda (in disco antico posita) ornatis*—Long corp. lin. 1.

*Habitat* in montibus excelsis Teneriffæ, usque ad 9000' s. m. ascendens.

Considering the excessive variability of the *S. canariensis*, I feel a little doubtful whether I ought to regard the present *Scymnus* (of which I have but two examples to judge from) as a state of that insect peculiar to the loftiest elevations of Teneriffe, or as specifically distinct. I believe, however, that the latter will be the safer course.

for although in mere colouring it scarcely differs from certain pale (though spotted) individuals of the *canariensis* (such as are often met with in barren districts, in Fuerteventura and elsewhere), still its more oblong outline and rather less convex upper surface do not seem to be paralleled in any of the numerous phases of its ally which I possess from so many remote parts of the archipelago. So that when I consider the immense altitude at which the two examples now before me were taken (they having been captured by myself on the Cumbre, overlooking the Cañadas, above Ycod el Alto—upwards of 9000 feet above the sea), I am inclined to suspect that they may prove to be the exponents of a separate species having a very elevated range.

656 *Scymnus ceicyonides*, n. sp.

*S.* species *S. canariensis* affinis, sed multo minor, paulo oblongior, paulo minus convexus, sensim brevius pubescens densiusque punctulatus, prothorace antice subangustiore, elytris rufis, in parte basali triangulari (per suturam, usque ad medium, obscure suffusus), et intermedium obsolete mox ante apicem, nigrescentibus.

Mas prothorace ad latera paulo dilutior, capite (mihi fallor), ut in sexu foemineo, nigro—Long corp. lin.  $\frac{3}{4}$

*Habitat* in Teneriffa, Gomera et Palma, passim.

It is scarcely possible, I think, that this small *Scymnus* (which is curiously suggestive, at first sight, of a minute *Ceicyon* with rufous elytra) can be any modification (even the most extreme one) of the *S. canariensis*, nevertheless it occurs often in company with that insect, though very much the rarer of the two. It differs from it in being considerably smaller and a little more oblong, somewhat less convex and more closely punctulated, and in its elytra being rufous, with only a triangular basal patch (which is generally prolonged a little, though in a diffused manner, along the suture) black. There is sometimes, however, a slight trace of an obsolete infuscated portion immediately before their extreme apex, and I believe that its head is black in both sexes,—merely the prothoracic edges being rather diluted in the males. I have taken it sparingly in Teneriffe and Palma, and it was found in Gomera by Dr. Crotch. My Teneriffan specimens are principally from Sta Cruz and the mountains above it, and from the vicinity of the Puerto Orotava.

657 *Scymnus maculosus*, n. sp.

*S.* rotundato-ovalis, minute punctulatus, cinereo-pubescens, nitidus, piceo-niger, prothorace ad latera paulo dilutior, elytris singulis ad apicem necnon in maculis sex (tribus se confluentibus in disco postico sitis, fasciam dentatam transversam efficientibus, una sub-

longitudinali intra discum anticum positâ, unâ subhumerali, et sexta pone hanc sublaterali) rufo-testaceis ornatis, pedibus piceo-testaceis

*Variat* elytrorum maculis plus minus confluentibus — Long corp lin  $\frac{2}{3}$ —vix 1

*Habitat* in Lanzarota, Fuerteventura, Canaria Teneriffa et Palma, parum rarus

This beautiful little *Scymnus*, so well distinguished by its dark piceous-black hue, laterally-diluted prothorax, and maculated elytra each of which is ornamented with six more or less confluent testaceous patches (the three postmedial ones being apparently *always* united, so as to form a transverse zigzag fascia), is widely spread over the archipelago, though nowhere common. I have taken it in Lanzarote and Fuerteventura, at Maspalomas in Grand Canary, at the Agua Garcia, the Agua Mansa and near Orotava in Teneriffe, and likewise in Palma. In Lanzarote it was found also by Mr Gray and in Teneriffe by Dr Crotch. It is closely allied to the Madeiran *S. flavopictus*, but is a trifle larger, and more obtuse anteriorly (its head and prothorax being perceptibly wider) and the colour both of its pale and dark portions is in both instances conspicuously darker.

#### 658 *Scymnus arcuatus*

*Coccinella arcuata*, Rossi, *Mant. Ins.* n. 88 (1794)

*Scymnus arcuatus*, Muls., *Securip. de France*, 245 (1846)

— — —, Woll., *Ins. Mad.* 468 (1854)

— — —, *Id.*, Cat. *Mad. Col.* 138 (1857)

*Habitat* in Teneriffa et Palma, rarissimus

The *S. arcuatus* of Mediterranean latitudes, which is so excessively abundant around Funchal in Madeira, would appear to be extremely rare at the Canaries. Indeed the only three specimens which I have seen of it hitherto were taken by myself—one between the Puerto Orotava and Realejo in Teneriffe and the other two in the Barranco da Agua of Palma. It may, however, be expected to occur (as in Madeira) about gardens and cultivated grounds.

#### 659 *Scymnus minimus*

*Coccinella minima*, Rossi, *Mant. Ins.* n. 89 (1794)

*Scymnus minimus*, Muls., *Securip. de France*, 260 (1846)

— — —, Woll., *Ins. Mad.* 470 (1854)

— — —, *Id.*, Cat. *Mad. Col.* 138 (1857)

*Habitat* insulas Canarienses in Palma sola hactenus haud observatus

The minute size, rounded outline, and uniformly black distinctly

punctulated surface of this European *Scymnus*, in conjunction with its pallid limbs, will sufficiently characterize it. It occurs in the Madeiran Group, and there can be little doubt that it is universal at the Canaries, though hitherto it does not happen to have been noticed in Palma. I have, however, myself taken it in Lanzarote, at Agua Bueyes and in the Rio Palmas of Fuerteventura, in Grand Canary, near the Puerto Orotava in Teneriffe, and close to Valverde in Hierro. In Gomera it was captured both by Mr Gray and Dr Crotch, the former of whom found it in the valley above San Sebastian.

### Genus 253 RHIZOBIUS.

Stephens, *Ill Brit Ent* iv 396 [script *Rhyzobius*] (1831)

#### 660 *Rhizobius litua*

*Nitidula litua*, *Fab*, *Mant Ins* i 52 (1787)

*Rhyzobius litua*, *Steph*, *Ill Brit Ent* iv 396 (1831)

*Cacidula litua*, *Bulle*, in *Webb et Berth (Col)* 74 (1838)

*Rhyzobius litua*, *Woll*, *Inv. Mad* 472 (1854)

— —, *Id*, *Cat. Mad. Col* 139 (1857)

*Habitat* insulas Canarienses, in Gomera solâ adhuc haud detectus

There can be little doubt that this common European insect, which is universal throughout the Madeiran Group, and which has been recorded from the Azores, is universal also at the Canaries—though hitherto it does not happen to have been observed in Gomera. But in Lanzarote, Fuerteventura, Grand Canary, Teneriffe, and Hierro I have myself captured it, and it was found in Palma and Hierro by Mr Gray. In Teneriffe it was met with likewise by Dr Crotch.

### Genus 254 LITHOPHILUS.

Flohlich, *Natu. forsch.* xxviii 11 (1799)

*Corpus* fere ut in *Coccidulâ* sed multo major, *prothorace* antice profundius excavato postice magis contracto, ad latera late subrecurvo-explanato. *Antennæ* 10- (nec 11-) articulatæ, art<sup>o</sup> 1<sup>mo</sup> sat magno robusto, 2<sup>do</sup> minore, 3<sup>uo</sup> ad 7<sup>imum</sup> gracilioribus (3<sup>uo</sup> elongato), reliquis clavam triarticulatam haud abruptam efficientibus (ult<sup>mo</sup> intus oblique truncato). *Labrum* transversum, submembranaceum, apice integrum. *Mandibulæ* ad apicem acute bifidæ, intus membrana breviter ciliatâ auctæ. *Maxillæ* bilobæ, breves, lobis pubescentibus, apice subito incurvis. *Palpi maxillares* elongati art<sup>o</sup> 1<sup>mo</sup> parvo, 2<sup>do</sup> longissimo, 3<sup>uo</sup> breviori, ult<sup>mo</sup> maximo securiformi. *labiales* art<sup>o</sup> 1<sup>mo</sup> parvo, 2<sup>do</sup> et 3<sup>uo</sup> longioribus, longitudine subæqualibus (3<sup>uo</sup> fusiformi). *Mentum* parvum, corneum, subobtriangulare basi truncatum, apicem versus regulariter latius, apice integrum. *Liquula* elongata, apice membranacea integra. *Pedes* longiores et validiores quam in *Coccidulâ* *tarsis* fere simili-

bus, sed longioribus, *unguiculis* multo majoribus intus (ut in illâ) denticulo minuto armatis

The general aspect of the unique insect from which the above characters have been drawn, combined with its posteriorly narrowed prothorax, its bifid (or internally dentate) claws and the *tendency* of its larger elytral punctures to arrange themselves in longitudinal rows, will at once, apart from the *minutiae* of its oral organs, affiliate it with the European *Lithophilus* (a near ally of *Cocculula*) and as I have no access to any published details of that genus, I have thought it desirable to enunciate it formally. In its *ten*-jointed antennæ (with their elongated third articulation), its very much larger size, and its totally different prothorax (which is deeply excavated in front, greatly rounded, and flattened out, at the sides, and much more contracted behind), as well as in its longer and robuster legs and claws it is at once separated from *Cocculula* proper.

661 *Lithophilus deserticola*, n. sp.

*L.* oblongus iatusculus, grosse fulvo-pubescent, subopacus, rufo-ferrugineus prothorace minute punctato ad latera rotundato-explanato, postice angustato, elytris in disco late nigrescentioribus minutissime punctulatis punctisque magnis (subseriatim dispositis) parce nigratis, interstitiis obsoletissime subelevatis — Long corp. lin. 2

*Habitat* Fuerteventuram, sub lapide in arenosis aridis ad Corralejo, Martio exeunte a. d. 1859, exemplar unum collegi.

The single specimen described above was captured by myself, from beneath a stone, in the dry sandy region at Corralejo in the extreme north of Fuerteventura, at the end of March 1859.

## Fam. 60. CORYLOPHIDÆ

### Genus 255 SERICODERUS

Stephens *Ill. Brit. Ent.* ii. 188 (1828)

662 *Sericoderus lateralis*.

*Cossyphus lateralis* (Meq.), *Gyll., Ins. Suec.* iv. 516 (1827)  
*Sericoderus thoracicus*, *Steph., Ill. Brit. Ent.* ii. 188 (1828)  
 — *lateralis* *Woll., Ins. Mad.* 478 (1854)  
 — —, *Id., Cat. Mad. Col.* 142 (1857)

*Habitat* Fuerteventuram, Canariam, Teneriffam et Gomeram, passim.

This common European insect, which abounds beneath vegetable refuse in Madena, and which was captured by Mr Bewicke at even the Cape of Good Hope, appears to be scarce in these islands, though

from its minute size it may perhaps merely have escaped, hitherto, more extensive observation. I have taken it in the Rio Palmas of Fuerteventura, in Grand Canary, and at Souzal, the Agua Garcia, and near the Puerto Orotava in Teneriffe, and six specimens are now before me which were found by Dr. Crotch, during the spring of 1862, in Gomera. In all probability it is universal throughout the archipelago.

## Fam. 61. ENDOMYCHIDÆ.

### Genus 256 LYCOPERDINA

Latraille, *Gen. Crust. et Ins.* iii 73 (1807)

#### 663 *Lycoperdina humeralis*, n. sp.

*L. elliptica* latiuscula, depressa, fere impunctata, fere calva, subnitida (minutissime alutacea), piceo-nigra, prothorace versus latera inæqualiter rufescentiore, transverso-quadrato, angulis posticis irectis, utrinque ad basin profunde longitudinaliter impresso, elytris pone basin rotundato-ampliatis, ad humeros læte rufis necnon ad apicem ipsum paulo rufescentibus, singulis striâ suturali tenui notatis, antennis tassisque fusco-ferrugineis.—Long. corp. lin. 2.

*Habitat* Teneriffam, rarissima, in laucetis excelsis humidis supra Tagananam, mense Maio a. d. 1859 specimen unicum cepi.

This beautiful *Lycoperdina* is a little larger, broader, more elliptical and more flattened than the European *L. bovisæ*, it is also less shining (being minutely alutaceous), and almost free from pubescence, its colour (at least of the prothorax) is of a more rufescent black, with the shoulders brightly rufous, and the extreme apex of its elytra diluted in hue, and its sutural stria is very much finer and less impressed. It would appear to be one of the rarest of the Canarian Coleoptera: the only specimen which I have seen having been captured by myself in Teneriffe, during May 1859, in the damp laurel-woods which clothe the mountain-range above Taganana.

### Genus 257 DAPSA

(Ziegler) Latraille *Règne Anim.* (edit. 2) v 159 (1829)

#### 664 *Dapsa edentata*, n. sp.

*D. rufo-ferruginea*, fulvo-pubescent, capite prothoraceque sat profunde punctatis, hoc ad latera edentato, antice rotundato-ampliato, angulis anticis obtusis, posticis subirectis, in disco canaliculato, postice utrinque profunde longitudinaliter impresso, elytris ellipticis basi truncatis, postice acutiusculis, seriato-punctulatis, maculâ obliquâ postmedia in singulis posita (obscurâ, interdum obsoletâ) ni-

grescente, antennis pedibusque vix clarioribus, femoribus ad basin ipsam nigrescentibus—Long corp  $\ln 1\frac{3}{4}$ —vix 2

*Habitat* in sylvaticis subsylvaticisque Canariæ, Teneriffæ et Palmæ, hinc inde parum vulgaris

It is just possible that the present *Dapsa* may be identical with the *D. barbaræ* of northern Africa, nevertheless, judging from the diagnoses of the latter given both by Lucas and Gerstaecker, and from the figure published by the former, I hardly think that such is the case—for the *D. barbaræ* is described as having its prothoracic disc, as well as a mere postmedial “punctum” of its elytra, black. The *D. edentata* is remarkable for its very elliptic elytra (which are suddenly rounded-outwards at a short distance behind their base, and thence regularly narrowed, or acute, to their apex), and for the obscure (occasionally obsolete) darker dash which is placed so obliquely on the hinder disc of either elytron as to unite at the suture (in highly coloured examples) in somewhat the form of the letter V. It is rather a common insect in certain localities in these islands—occurring generally beneath dry fallen leaves in sylvan and subsylvan spots, under moss and rubbish at the base of old walls, and amongst dense herbage in semicultivated grounds. I have taken it in Grand Canary, Teneriffæ, and Palma. My Teneriffan examples are principally from above Taganana, from Las Mercedes, Souzal, La Esperanza, the Agua Mansa, and the vicinity of the Puerto Orotava.

## Fam. 62. ZOPHOSIDÆ.

### Genus 258 ZOPHOSIS.

Latreille, *Gen. Crust. et Ins.* ii 146 (1807)

#### 665 Zophosis 4-carinata

*Z. oblongo-ovalis*, subopaca, alutacea, capite prothoraceque distincte (epistomate dense et profunde) punctatis, elytris ante apicem truncato-desinentibus, parvis minutissime asperato-punctulatis (aut fere granulatis), leviter malleato-inæqualibus, singulis costis duabus elevatis (antice et præsertim postice evanescentibus), necnon tertiâ versus suturam minus distinctâ et multo magis abbreviata, longitudinaliter instructis—Long corp  $\ln 2\frac{1}{2}$

*Zophosis 4-carinata*, Deyrolle (*in hoc opusculo citata*)

*Habitat* Teneriffam, a Barone “Castello de Parva” communicata

The present *Zophosis*, which has been observed hitherto only in Teneriffæ, may readily be known by each of its elytra being furnished with two very elevated longitudinal costæ, and a third one (nearer to

the suture) which is considerably shorter and less distinct, from which it would appear that one of the three lateral ones is entirely absent. It is more oblong, rather less convex, much less shining, and a little more coarsely punctured than the *Z. plicata*, it is also of a somewhat less intense black (being often just perceptibly subænescent), and its elytra, although without any tendency to be obscurely widened behind, are nevertheless rather more decidedly subtruncated, or *bent downwards*, before the apex. The few specimens of the *Z. 4-carinata* which I have seen were communicated from Teneriffe by the Barão do Castello de Paiva.

### 666 *Zophosis plicata*

*Z. subovalis*, (præsertim postice) latiuscula, convexa, nitida, aterrima, capite prothoraceoque minute (epistomate densius et distinctius) punctatis, elytris ante apicem subtruncato-desilientibus, parcius minute subasperato-punctulatis, grosse malleato-inæqualibus, singulis costis tribus latiusculis elevatis (antice et præsertim postice evanescentibus), necnon quatâ versus suturam minus distinctâ sed haud obsoletâ, longitudinaliter instructis.—Long corp. ln 2-3

*Zophosis plicata*, Brulle, in Webb et Berth (Col.) 64 pl. 1 f. 8 (1838)  
 — vagans, Hartung\* [nec Br.], Geolog. Verh. Lanz. und Fuert  
 140, 141

*Habitat* Lanzarotam et Fuerteventuram, necnon etiam in insulis parvis adjacentibus (sc. Graciosa et Lobos), ubique vulgaris.

This is the common *Zophosis* of Lanzarote and Fuerteventura, where it abounds at nearly all elevations, occurring likewise in the small adjacent islands of Graciosa and Lobos (off the extreme north of the former, and latter, respectively). It was taken also by Mr. Gray and M. Hartung, and has been communicated by the Barão do Castello de Paiva. I think there can be no doubt that it does not extend further westward in the archipelago, unless indeed the *Z. vagans*, from Grand Canary, should be regarded (which, however, is scarcely possible) as an insular modification of it.

The *Z. plicata* differs in being rather more shining than the other species here enumerated, and in having its elytra very uneven (or malleated) and furnished with broader and more elevated longitudinal plicæ—the three outer ones (on each elytron) being considerably raised, whilst even the more anteriorly-abbreviated one, nearer to the suture, is sufficiently conspicuous on the hinder disc. It is also,

\* Dr. Heer having sent me a type of what he regarded (though erroneously) as the *Z. vagans*, in the list which he prepared for M. Hartung's volume, I can state for certain that his species there alluded to is in reality the *Z. plicata*. Indeed, that being apparently the *only Zophosis* found in Lanzarote and Fuerteventura, such a conclusion would in any case have been inevitable.

relatively, a *little* more convex and ovate than its allies, having a somewhat more evident tendency to be faintly widened behind the middle of the elytra, at which point it is also a trifle more suddenly curved downwards, or truncated—at any rate more so than is the case in any of the *following* species, though scarcely so much so as in the preceding one

#### 667 *Zophosis vagans*

*Z* præcedenti similis sed plerumque paulo minor angustior oblongior (versus apicem nullo modo latior et ibidem paulo minus evidentius desiliienti-subtriuncata), sensim minus nitida (evidentius alutacea), minus convexa et minus aterrima (interdum obsoletissime subænescens), capite prothoraceque profundius punctatis, elytris densius, profundius ac magis asperato-punctatis, sat minus malleato-inæqualibus, singulis brevius ac minus alte 3-costatis, costa quarta (versus suturam) obsoletâ—Long corp ln  $2\frac{1}{2}$ – $2\frac{3}{4}$

*Zophosis vagans*, Brulle, in Webb et Berth (Col) 64 (1838)

*Habitat* Canariam Grandem præsertim in montibus interioris degens

Whilst the last species is peculiar to Lanzarote and Fuerteventura, the present one seems to be found only in Grand Canary—occurring more particularly, I believe, in the central districts (as Tajarana &c) of that island. It differs from the *placata* in being on the average, a little smaller, narrower, and more oblong (it having apparently no tendency to be slightly widened behind the middle, where also it is just perceptibly less truncated, or with the apical region somewhat more *drawn out*), in its surface being less shining (or more coarsely alutaceous), a little more strongly punctured, and not quite so intensely black (there being often a barely traceable ænescent tinge), and in its elytra being less uneven, and with their costæ *very* much less raised—the three outer ones being also somewhat shorter, and the fourth one (towards the suture) *obsolete*. It agreed sufficiently well with the types of M Brullé's *Z vagans*, which I examined in Paris, to leave little doubt on my mind that it was conspecific with it

#### 668 *Zophosis Clarkii*

*Z* præcedenti (sc *Z vaganti*) valde affinis, sed paulo magis regulariter ovalis (antice vix sublatis) et obsoletissime subcyanescenti- (potius quam subænescenti-) atra, elytris vix minus malleato-inæqualibus, costis sensim angustioribus, costâ secundâ in singulis antice magis abbreviatâ, tertiâ in disco sensim argutius et rectius determinata (sed haud magis elevatâ)—Long corp ln  $2$ – $2\frac{1}{2}$

*Zophosis Clarkii*, Deyrolle (in hoc opusculo citata)

*Habitat* in intermediis Canariæ Grandis, passim

This *Zophosis* (which is likewise from Grand Canary) is excessively near to the last one, and is in some respects intermediate between it and the *bicarinata*, nevertheless it is certainly more closely related to the *vagans* than to the latter. It differs, however, from that species in being a little more regularly oval, or just perceptibly wider in front, in its colour being of a deeper black, with a slight *tendency* to a sub-cyanaceous (rather than a subænescent) tinge, and in its elytra being a little more even, or less malleated, and with their costæ a trifle narrower—the second one of which is *more abbreviated anteriorly*, whilst the third is somewhat more straightly and sharply defined. Its less rounded outline and *very* much more developed *placæ* will at once separate it from even the most costate phasis of the *bicarinata*. I have observed it hitherto only in the region of El Monte in Grand Canary, but it is probably elsewhere diffused.

#### 669 *Zophosis bicarinata*.

*Z* subrotundato-ovalis, subnitida, vel aterrima vel obsoletissime sub-metallico-tincta, capite prothoraceque minutissime et leviter (epistomate densius et distinctius) punctatis, elytris parcius minutissime granulatis, subæqualibus (rarius malleatis), singulis vel costis duabus valde indistinctis instructis vel simplicibus (costis obsoletis)

α Sæpius obsoletissime subcyaneo-tincta, elytris singulis costis duabus (sc. laterali et discali) valde indistinctis instructis (costâ secundâ et quartâ obsoletis) [Ins *Canaria Grandis* (borealis)]

β Obsoletissime subcyaneo-tincta, elytris singulis costâ unâ (sc. discali) instructis (reliquis obsoletis) [Ins *Gomera*]

γ [= *Z. minuta*?, Br.] Sæpius obsoletissime subænescenti-tincta, elytris simplicibus (costis omnibus obsoletis) [Ins *Teneriffa*]

δ Obsoletissime subcyaneo-tincta, vix nitidior, capite prothoraceque paulo evidentius punctatis, elytris plus minus malleato-inæqualibus, vel simplicibus vel costâ laterali parum distinctâ instructis [Ins *Canaria Grandis* (australis)]—Long corp. lin 2—vix 3

*Eiodius minutus*?, *Fab*, *Ent. Syst.* 1: 93 (1792)

*Zophosis bicarinata*, *Sol*, *Ann. de la Soc. Ent. de France*, III: 617 (1834)

— et *minuta*?, *Brulle*, in *Webb et Berth* (Col.) 64 (1838)

*Habitat* in *Canaria*, *Teneriffa* et *Gomera*, hinc inde vulgaris

If it be admitted that the four states which I have indicated above are but insular modifications of a single species (and I think it will scarcely be possible to regard them as otherwise), the present *Zophosis*, although extremely local, would appear to be more widely distributed over the archipelago than any of the others here enumerated. Its elytral costæ, even when traceable, are excessively indistinct, and it would seem as if their greater or less development was dependent in some way upon certain local influences which have served gradually

to establish races which are permanent, although included within exceedingly narrow limits. Thus, on the low sandy isthmus of Grand Canary, between Las Palmas and the Isleta where the insect abounds, the specimens have usually their discal and lateral keels more or less traceable (though often very obscurely so), whilst occasionally there are faint indications of even the *second* one. The Gomeian examples, judging from a type now before me which was captured by Dr. Clotch, have the discal carina pretty evident, but the others hardly perceptible, whilst a large array of individuals from Teneriffe, which were met with by Mr. Gray and myself near Sta Cruz, have *all* the ridges entirely effaced. This last state has likewise been communicated, from Teneriffe, by the Barão do Castello de Paiva.

Apart from this peculiarity of the elytral costæ, which are either very indistinct or else totally obsolete, the *Z bicarinata* may be known by its rather rounded outline and light sculpture. In Grand Canary its surface is generally of an intenser black than in Teneriffe—having in the former case more frequently, a just perceptible subcyaneous, and in the latter a subænescent tinge.

It is barely possible that what I have treated as the state ‘*δ*’ may be specifically distinct, but I think that its few differential characters are not constant enough to render such probable. I captured it near to Maspalomas, in the south of Grand Canary, and it recedes from the state “*α*” (found in the north of that island) in having its head and prothorax a trifle less alutaceous and rather more evidently punctured, and in its elytra being more or less uneven, or *malleated*. This inequality of the surface makes it difficult to decide whether the obscure keels are developed, or not—but the lateral one in some examples appears to be well expressed, whilst in others it is scarcely traceable.

## Fam. 63. ERODIADÆ.

### Genus 259 ARTHRODES

Soher, *Ann de la Soc Ent de France*, iii 513 [script *Arthrodæis*] (1834)

Although M. Brullé consigns all the Canarian members of this family to *Eiodius*, citing only one of them (his *E subcostatus*) as referable to (what he would seem to regard as the subgenus) ‘*Arthrodæis*,’ nevertheless, after a most careful inspection of them, I am satisfied that they are all\* exponents of a single group—differing mainly from

\* Whilst asserting, however, that they are “all” exponents of a single group, I do not mean to include that particular species (whatsoever it may be) which M. Brullé cited (p. 63) as the “*Eiodius europæus*, Fab.,” and which (whether rightly

*Erodus propei* in its narrower and transversely-elongate eyes (a character, however, which varies slightly *according to the species*), in its epistome (which has a tendency to be more or less tridentate anteriorly) being separated from the forehead *by a keel* (for the most part exceedingly conspicuous, but occasionally subobsolete\*), in its antennal club being a little broader or more transverse, and in its elytra having their longitudinal costæ either altogether or very nearly absent, and the angulated edge, or lateral *plica*, of their epipleuræ (which is uninterrupted in *Erodus*) either *entirely* or only *posteriorly* rounded and effaced. The admission, however, of so large a number of additional representatives into *Aithrodes* may possibly necessitate a slight readjustment of its generic formula. Indeed Lacordaire (simply following M. Brullé) quotes the *E. subcostatus* only (of all the Canarian species) as an *Aithrodes*, but had he inspected them himself he would have seen that they are all referable to the *same group*, and consequently that the "yeux médiocres, non transversaux" could not be maintained as a structural peculiarity of *Aithrodes*,—any more than the allusion to its members as "*petits insectes*," while some of them *exceed* in bulk the largest *Erodus* with which I am acquainted.

The species of *Aithrodes* are both numerous and local throughout the Canarian archipelago, almost every island having apparently some representative essentially its own. They reside principally beneath stones, burrowing into either the volcanic soil of the intermediate elevations, or else into the loose sand adjoining the sea-shore—a mode of life which their powerful and strongly palmated anterior tibiae would clearly indicate. If it be thought that I have erected too many species amongst forms thus obscure, I can only say that the structural characters of their epipleural *plica* and epistome appear so little subject to variation that I cannot conscientiously reduce the number

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identified or not) seemed to me, when I examined it hastily in Paris, to be at any rate an *Erodus*. Nevertheless, since I feel far from satisfied that the examples of M. Webb and Berthelot may not have been accidentally imported into the islands (a possibility which is not diminished by the consideration that a true *Erodus* is now before me which was taken by Dr. Clotch on the Mole at Sta Cruz in Teneriffe—escaped from the actual vessel in which he had himself arrived from Mogadore!), I cannot admit the genus *Erodus* into this Catalogue without at all events further evidence. Indeed, *Aithrodes* being so essentially the *representative* of *Erodus* at the Canaries, where moreover it is so universal, it might involve a serious geographical blunder to include the latter (which may perhaps have been a mere chance-introduction from the African coast).

\* May not Solier's genus *Anodesis* have been erected on one of the larger species of *Aithrodes*, in which the frontal *carina* is subobsolete and the eyes much

§ I *Epistoma apice plus minus evidenter tridentatum*  
 a *Epipleuræ plica humeralis obsoleta*

670 *Arthodes inflatus*, n sp

*A* atei convexissimus, subopacus, capite prothoraceque subtiliter et parce punctulatis, illius carinâ frontali arcuata distinctâ, hâc ad latera subrotundato et vix marginato, elytris subtilissime et parce granulatis, leviter subreticulato-malleatis, epipleuris valde rotundato-obtusis, pedibus brevibus, tarsis brevibus et unâ cum antennis nigro-piceis — Long corp ln 5-5½

*Habitat* in insula parvâ “Graciosa,” juxta Lanzarotam borealem sitâ, d 11 Mart A D 1859 deprehensus

The excessively convex and inflated body of this *Arthodes*, which has its head and prothorax minutely and rather sparingly punctulated, whilst its elytra (which are slightly malleated) are beset with extremely diminutive, almost imperceptible granules, combined with its somewhat laterally rounded and very obscurely margined prothorax and its shortish limbs and feet, will sufficiently distinguish it. Its epipleuræ are greatly rounded and obtuse, and the humeral plica at their base is obsolete—a structure which causes the shoulders to appear a little drawn or *nipped* in so that the base of the prothorax rather exceeds in width the base of the elytra. The only specimens which I have taken (five in number) were captured in the little island of Graciosa, off the extreme north of Lanzarote, on the 11th of March 1859

671 *Arthodes curtus*

*A* antice subangustior, subnitidus (interdum subopacus), subtilissime et parcissime punctulatus, carinâ frontali arcuatâ, distinctâ, prothorace ad latera et antice sat grosse marginato elytris inæqualibus, 1 e plus minus malleatis necnon plus minus distincte longitudinaliter interrupte sulcatis, pedibus elongatis — Long corp ln 5-6

*Erodus curtus*, *Brulle*, in *Webb et Berth* (Col) 63 pl 1 f 7 (1838)

*Habitat* in montibus Canariæ Grandis, hinc inde vulgaris

A most distinct species, which I have observed hitherto only in Grand Canary. It may readily be known by its large size and elongate legs, and by its elytra being usually extremely uneven and more or less evidently (though *irregularly* and *interruptedly*) longitudinally sulcate. This last character, however, is subject to considerable variation, according to the district in which the insect is found. And it is further remarkable for its outline being *comparatively* (though but slightly) narrowed anteriorly, for its surface being *usually* more shining than is the case in the other species here enumerated, and

likewise *most* minutely, remotely, and evenly punctulated all over, and for its prothorax being rather coarsely margined at the sides and (though less evidently so) in front. That it is correctly identified with M. Brullé's *E. curtus* I am enabled to vouch for certain, having examined his original types in Paris.

The *A. curtus* is locally abundant on the mountains of Grand Canary. I have taken it on the slopes above San Mateo, towards the Roca del Soueilho, and during April 1858 it occurred in profusion, crawling sluggishly across the pathway on the ascent to the Pinal of Tarajana, above San Bartolomé.

b *Epipleura plica humeralis brevissima*

#### 672 *Arthrodes obesus*

*A. præcedenti paulo minor, subrotundior, carinâ frontali sensim minus arcuatâ, prothorace ad latera et antice paulo minus grosse marginato, angulis anticis minus productis, elytris evidentius (sed minute) densiusque punctulatis et multo magis æqualibus (nec sulcatis), plus minus leviter malleatis, antennis picescentioribus*

*Var. β sumillima* [an species distincta?] Elytris magis æqualibus, parcius et sensim etiam levius punctulatis, fronte interdum minute bifoveolatâ, pedibus picescentioribus [Ins. Palma et Hierro]—Long corp. lin 3-5

*Erodus obesus*, Brulle, in Webb et Berth (Col) 63 (1838)

*Habitat* in Teneriffa, varietate β ad Palmam et Hierro pertinente

The six examples now before me agree sufficiently well, I think, with M. Brullé's types, which I examined, and also with his "description," to leave little doubt that they are (at any rate the *Teneriffan* form, if not the "*var. β*" also) conspecific with his *Erodus obesus*. Apart from their possessing (at the humeral angles of the elytra) a very short epipleural plica, which does not exist in the *A. curtus*, the *A. obesus* may be known from that insect by its rather smaller size and perhaps somewhat rounder outline, by its frontal keel being perceptibly less curved, by its prothorax being a little more finely margined along the lateral and anterior edges, by its elytra being more coarsely and closely (though, at the same time, very minutely) punctulated, as well as *much* more *even* (being free from longitudinal sulci, and apparently only a little malleated), and by its antennæ being rather more picescent. These remarks apply more particularly to what I have regarded as the *normal* state of the species (represented by the *Teneriffan* individual described from, and which was communicated from St. Cruz by the Barão do Castello de Paiva) and I should perhaps add that the types which I inspected in Paris

had the surface of their elytra altogether a little more uneven, but the more or less malleated sculpture is so variable that I attach but slight importance to its development

The "*var*  $\beta$ ," however, from Palma and Hierro may *possibly* be the exponent of a nearly allied species (in which the elytra are still *more* even, and a trifle more sparingly and finely punctulated), but I believe that it is a mere insular state of the *obesus*

### 673 *Arthrodes byrrhoides*, n sp

*A* convexus, subopacus, *A inflato* primâ facie propinquans, sed paulo minus convexus, prothorace ad latera minus rotundato et etiam evidentius immarginato, elytris densius et multo subtilius granulatis (granulis minutissimis, nisi oculo fortissime armato observandis) et plicâ humerali distinctâ (nec obsoletâ), parum incrassata —Long corp lin  $4\frac{1}{2}$

*Habitat* Fuerteventuram, a meipso paice repertus

The two specimens from which the above diagnosis has been compiled were taken by myself in Fuerteventura, but I am not quite certain as to the precise locality. In their very convex body and comparatively unsculptured surface (the head and prothorax being most minutely punctured, and the elytra, which are slightly malleated, beset with infinitesimal, scarcely distinguishable, granules), they have much the *primâ facie* appearance of the *A inflatus*, nevertheless, judging from the examples before me, the species would appear to be rather smaller and less convex, and to have a conspicuous (though short) humeral plica—which causes the extreme base of the elytra to be a little wider than the extreme base of the prothorax. The latter, also, is even still more decidedly immarginate, and its elytral granules are denser and (if possible) smaller still, being barely traceable even beneath a high magnifying power. Its humeral costa is rather longer than in the *obesus*, but not so long as in the members of the following Section

### 674 *Arthrodes laticollis*.

*A* præcedenti similis, sed nitidus, vix minus convexus, carina frontali magis elevata, capite prothoraceque parcius minutissime punctulatis, hoc latiusculo, convexo, immarginato, ad angulos ipsissimos posticos elytrorum basin sensim superante et ibidem suturâ (inter prothoracem et elytra) quasi in fissuram desiliente, elytris multo parcius minutissime granulatis (granulis ægerime observandis), paulo grossius sed parcius malleatis, plicâ humerali crassiore (se valde incrassatâ) sed, ut in illo, brevissimâ —Long corp lin  $4-4\frac{1}{2}$

*Eiodus laticollis*, Brulle, in *Webb et Berth* (Col) 63 (1838)

*Habitat* Fuerteventuram, parum rarus

I have little hesitation in identifying three specimens now before me (and which were captured by myself, either in Fuerteventura or else in the little adjacent island of Lobos) with M. Brullé's *Erodus laticollis*, for the notes which I took whilst in Paris, after an accurate inspection of his types, are in almost precise accordance with the *Arthodes* now under consideration, whilst the fact of his examples being labelled as coming from "Fuerteventura" would tend still further to corroborate my conclusion. In the excessive shortness of its humeral plica the *A. laticollis* (as here defined) agrees with the *byrrhodes*, but although thus abbreviated the plate is very much thicker than in that species, and yet, in spite of this, the extreme base of the elytra does not surpass in width the base of the prothorax—but rather the reverse, inasmuch as the hinder prothoracic angles project perceptibly beyond the humeral ones. There is also a peculiarity in that particular region, from the surfaces of the elytra and prothorax not being, there, in a continuous curve,—both of them somewhat falling away, so as to produce a slight fissure, or lacuna, at either end of the sutural line which separates the two segments. In other respects, the *A. laticollis* is remarkable for being shining, and for having its head and prothorax (the latter of which is transverse and immarginate) most minutely and rather distantly punctulated, whilst the elytral granules are, in like manner, excessively diminutive and remote—indeed but just distinguishable even beneath a high magnifying power. Its frontal carina is considerably raised, and rather angulated in the centre.

c. *Epipleura plica humeralis longior* (sed via ad medium ducta)

# 675 *Arthodes Hartung*, n. sp.

*A.* fere ut *A. punctatulus*, sed forsân major, puncturâ omnino multo subtiliore, multo levior et multo remotior (punctis in capite prothoraceque vix nisi oculo armato observandis), carinâ frontali paulo distinctiore ac minus curvatâ, prothorace ad latera minus grosse marginato.—Long. corp. lin. 6.

*Erodus obesus*<sup>2</sup>, Hart [nec Br.], *Geolog. Verh. in Lanz und Fuert* 141.

*Habitat* Fuerteventuram, a Dom. Hartung repertus.

Although very unwilling to erect a species, in a genus like the present one, from the evidence afforded by a single example, yet a large *Arthodes* now before me (which was taken by M. Hartung in Fuerteventura) differs so widely in its sculpture from the *A. punctatulus* that I cannot believe it to be referable to any state of that insect. It differs mainly in the punctules of its entire surface being

very much smaller, lighter, and more remote (indeed those on the head and prothorax are but just perceptible even under a lens), and in its frontal keel being rather more evident and somewhat less curved

676 *Arthodes punctatulus*, n sp

*A* speciebus præcedentibus affinis, sed ubique distincte, acute et sat dense punctulatus (punctis in elytris asperatis), carinâ frontali curvatâ indistinctâ (sæpe etiam subobsoletâ), prothorace ad latera (præsertim postice) parum grosse marginato et plicâ humerali (ut in speciebus sequentibus) longiuscula

*Var*  $\beta$  Puncturâ omnino paulo leviores, prothorace ad latera vix minus distincte marginato [*Ins Fuerteventura*]—Long corp ln 4-5½

*Habitat* Lanzarotam et Fuerteventuram, haud infrequens

The present species seems to be universal throughout Lanzarote where, however, it is by no means abundant—occurring principally, beneath stones, at intermediate elevations. It may easily be recognized by its surface being distinctly and sharply punctured all over (the punctures on the elytra being rather obliquely impinged, and having therefore the appearance of granules when viewed in a particular direction), by the lateral edges of its prothorax being somewhat coarsely margined posteriorly but more lightly so in front, and by its frontal keel being indistinct and often obsolete. Its epipleural costa is well defined, and reaches (from the humeral angles) almost halfway to the apex—as in the other species of this Section. It was likewise taken in Lanzarote by Mr Gray and M Hartung.

I took two examples in Fuerteventura which differ only from the Lanzarotan ones in being altogether a little more lightly punctured, and in having the lateral edges of their prothorax rather less distinctly margined. They retain, however, the essential characters of the species, and I have therefore treated them as the exponents of a slight insular variety.

677 *Arthodes parcepunctatus*, n sp

*A* subnitidus, ubique distincte sed parce punctatus (punctis in elytris paulo majoribus), carina frontali distinctâ sed minus curvatâ, prothorace ad latera oblique subrecto et ibidem (neon etiam antice, sed minus evidenter) sat grosse marginato, elytris parum mal-leatis, plicâ humerali postice subabrupte terminatâ—Long corp ln. 3-3½

*Habitat* Gomeram, a DD Gray et Crotch lectus

This and the following three species are considerably smaller than the other members of the genus here enumerated, and of the pre-

sent one I have seen as yet but two examples, both of which were captured in Gomera—one of them by Mr Gray during February 1858, near San Sebastian, and the other during the spring of 1862 by Dr Crotch. The *A. pariepunctatus* may be known by its surface being less opake than is the case in its allies, and *sparingly* but *distinctly* punctured all over—the elytral punctures, however, being a trifle larger than the remainder. Its frontal carina is conspicuous, but not greatly arcuated, its prothorax is somewhat obliquely-straight at the sides (or, if anything, even a little incurved behind the middle), and rather coarsely margined, its elytra are slightly malleated, and its epipleural costa is subabruptly terminated behind.

§ II *Epistoma apice vel fere vel omnino simpliciter emarginatum*

a *Epipleuræ plica humeralis obsoleta*

678 *Arthodes subciliatus*, n. sp.

*A. globoso-ovatus*, subnitidus, in limbo (præsertim antice) parce fulvo-pilosus, capite prothoraceque dense et profunde punctatis, illius carinâ frontali rectâ valde elevatâ, epistomate antice obsoletissime subtridentato (interdum quasi simpliciter emarginato), hoc ad latera fere haud (sed antice sensim) marginato, elytris convexis, subtilius asperato-punctulatis, paulo malleatis, antennis pedibusque longiusculis, gracilioribus, illis unâ cum tarsiis rufo-piceis, tibiæ anteriorum spinis duabus elongatis—Long corp. lin  $2\frac{1}{3}$ —vix 3.

*Habitat* Fuerteventuram, ad radices plantarum in aridis arenosis submaritimis fodiens.

Apart from its small size and subglobose body, which has the edges (and the underside immediately beneath them) sparingly studded, as in many other sand-insects, with a few fulvescent hairs, and its epipleuræ greatly rounded and obtuse, with their lateral costa entirely obsolete, this remarkable little species may immediately be known by its rather shining surface, by its head and prothorax being densely and very coarsely punctured, whilst the elytral punctures are smaller and asperate, by its frontal keel being *straight* and much elevated, and by its antennæ and legs being comparatively rather long and slender. The two spines of its anterior tibiæ are acute and considerably developed, and its epistome is so obsoletely tridentate in front that even the rudiments of a central tooth (although sometimes apparent) seem often to be totally inappreciable—when, of course, there is merely an emargination.

The *A. subciliatus* is eminently a sand-burrowing insect, occurring at the roots of plants on the small hillocks of drifted sand adjoining the sea-coast in Fuerteventura. In such situations it was taken by

Mr Gray and myself about a mile to the south of Puerto de Cabras, in January 1858, and by myself, during the spring of the following year, in the arid district of Corralejo, at the extreme north of that island

### 679 *Arthodes subcostatus*

*A* præcedenti similis, sed pleurumque paulo minor et sensim minus convexus, puncturâ omnino densiore et subfortiore sed elytris singulis in lineis duabus vel tribus valde irregularibus indistinctis longitudinalibus lævioribus sensim minus punctatis, capite vix angustiore, prothorace immarginato, angulis anticis paulo magis porrectis—Long corp lin 2-2½

Elodius (*Arthodeis*) *subcostatus*, *Brulle, in Webb et Berth (Col)* 64 (1838)

*Habitat* Canariam Grandem, in locis similibus ac præcedens, in aridis arenosis juxta urbem Las Palmas deprehensus

The present *Arthodes* is very closely allied to the preceding one, and is apparently peculiar to Grand Canary, residing in much the same sort of localities—at the roots of sand-plants, where it burrows into the loose drifting sand. In such situations I took it, between Las Palmas and the Puerto da Luz, during the spring of 1858. It agrees with the *A subciliatus* in its general outline and structure, as well as in its laterally-pilose body, rather slender, elongate limbs, and the greatly produced spines of its anterior tibiæ, but differs from it in being, on the average, a trifle smaller and less convex, in its punctuation being altogether a little denser and perhaps somewhat coarser, but with two or three obscure *ill-defined* lines (or spaces) down each of its elytra, which are comparatively glabrous (or free from sculpture), by its head being perceptibly narrower, and by its prothorax being destitute of even an obscure margin along its anterior edge, and with its front angles a little more porrect. Having examined M. Brulle's types, I am enabled to state for certain that the species is correctly identified.

b *Epipleuræ plica humeralis distincta (sed vix ad medium ducta)*

### 680 *Arthodes costifrons*, n. sp.

*A* affinis *A subciliato*, sed paulo major, oblongior, minus convexus, minus nitidus et in limbo calvus (nec ciliatus), carina frontali ut in hoc valde elevatâ sed curvatâ (nec recta), epistomate antice fere simpliciter emarginato sed sub lente fortissimâ minutissime trisinuato (quasi dentes 4, internos obsoletissimos, efficiente), prothorace ad latera sensim (sed antice haud) marginato, unâ cum capite densius (sc. densissime) et subtilius punctato, elytris subgrossius malleatis sed multo subtilius parciusque punctulatis (punctulis haud

asperatis et irregulariter dispersis), antennis tarsisque sensim obscurioribus —Long corp ln  $2\frac{1}{2}$ —3

*Habitat* Lanzarotam et Fuerteventuram, in hac haud infrequens, unâ cum *A. subciliato* in aënoasis fodiens, sed ab illâ exemplar unum (a meipso captum) adhuc vidi

The *A. costifrons* is a Fuerteventuran species, and appears, like the *A. subciliatus* (with which it is found in company), to be of sand-burrowing propensities, nevertheless it is *not* pilose at the edges of its body. Although small, it is a little larger, as well as more oblong and less convex, than that insect, its surface is more opaque, its frontal keel (which is equally elevated) is considerably *curved*, instead of being straight, its head and prothorax (the latter of which is narrowly margined at the sides, but immarginate in front) are much more densely and finely punctured, whilst the punctules of its elytra are excessively diminutive and distant (being, also, irregularly dispersed), and its epipleural costa (instead of being obsolete) is developed, though not much incrassated. Its epistome appears at first sight to be simply emarginated at the apex, but when viewed beneath a very powerful glass it will be seen to be most minutely trisnuated, so as to shape out four points, the two inner ones of which are barely traceable and sometimes quite obsolete. The *A. costifrons* seems to occur also in Lanzarote, a single example now before me having been taken by myself in that island

#### 681 *Arthrodes malleatus*, n. sp.

*A. præcedenti* (*A. costifrons*) similis, sed paulo major, oblongior, capite prothoraceque vix profundius punctatis, hâc ad latera vix evidenter marginato, elytris multo magis malleatis punctulisque (irregulariter dispositis et in lacunis solis sitis) sensim majoribus, pedibus paulo minus gracilibus, tibiærum anticærum spinis duabus magis obtusis, apicali minus curvatâ —Long corp ln  $2-3\frac{1}{2}$

*Habitat* Lanzarotam, sub lapidibus in intermediis degens

Although closely allied to the *costifrons*, this *A. thiodæ* is certainly distinct from it, occurring, apparently, in the intermediate districts of Lanzarote, where it was taken by Mr. Gray and myself, during the winter of 1858, in the extreme north of that island, and by myself, during the spring of the following year, in the little adjacent island of Graciosa. It differs from the *costifrons*, mainly, in being a little larger and more oblong, in its elytra being considerably more uneven, or *much* malleated, and in having their punctures (which are collected into merely the *depressions*, leaving the more elevated parts of the surface almost free from sculpture) a good deal larger and

in its legs being rather less slender, with the two spines of their anterior tibiæ, the apical one of which is considerably less *emved*, both shorter and more obtuse

682 *Arthrodes emarginatus*, n. sp.

*A. species A. costifrontis* similis, et cum hoc structurâ tibiarum anticarum congruens, sed forsân paulo major obtusior, capite prothoraceque multo parcius punctulatis, illius carinâ frontali multo minus elevatâ ac paulo minus curvatâ, epistomate apice omnino simpliciter emarginato, hâc sensim latiore et omnino immarginato, elytris densius, æqualiter et minute asperato-punctulatis, tibiarum anticarum spinis elongatis, acutis, apicali curvatâ —Long corp. ln 3

*Habitat* Fuerteventuram, semel tantum reperiuntur

I have but a single example of this *Arthrodes*, captured by myself in Fuerteventura, to judge from, but it appears to be exceedingly distinct from both the *subcalatus* and *costifrons*, with which I believe that it was taken in company. Indeed the structure of the teeth of its anterior tibiæ is precisely the same as in those *sand-burrowing* species, and its general aspect is very much that of the *A. subcalatus*. It is, however, a little larger and more obtuse, its head and prothorax (the latter of which is not only perceptibly wider, but also *entirely* immarginate) are *much* more sparingly punctulated, its frontal keel is considerably less elevated, and not quite so curved, the emargination of its epistome is unmistakably *simple*, and its elytra are more closely and *equally* punctulated, the punctures moreover being conspicuously asperate.

683 *Arthrodes geotrupoides*, n. sp.

*A. præcedenti* similis, sed multo major, carinâ frontali minus elevata, subobsoletâ, plicâ humerali magis incrassata, subcurvata, et spinis tibiarum anticarum obtusioribus, minus productis, apicali minus curvatâ —Long corp. ln  $3\frac{2}{3}$ –5

*Habitat* Fuerteventuram, parum iarus

In its form, sculpture, and subopake surface as well as in the *perfectly* simple emargination of its epistome, the present *Arthrodes* is coincident with the last one, and, like it, it was taken by myself, though more abundantly, in Fuerteventura. It is, however, considerably larger, its frontal keel is still less elevated, indeed almost obsolete, its humeral plica is thicker, and slightly arcuate, and the two teeth of its anterior tibiæ are blunter and less produced, the apical one moreover being less outwardly curved. This last character indeed is perhaps the most significant of them all—implying, I think, a rather different mode of life, for the spines of the anterior tibiæ

being comparatively elongated and acute, and the apical one of them somewhat curved, is a structure which appears to be more particularly indicative of the *sand-burrowing* species, which reside near the coast

## Fam. 64. Tentyriadæ.

### Genus 260 Tentyria.

Latreille, *Hist Nat des Crust et Ins* x. 270 (1804)

#### 684 *Tentyria interrupta*

*Tentyria interrupta* [Latr. ?], Brulle, in Webb et Berth (Col) 66 (1838)

*Habitat* ?

I know nothing of this insect, except that I examined it hastily whilst in Paris, and that it is unquestionably distinct both from the *T. elongata* and the *Paucica hispida*. As M. Brullé vouchsafes neither a description of it nor its *habitat*, I am of course perfectly unable to say even in what island it was found. Indeed his short notice of it is about as vague and unsatisfactory as it is well possible to be in a published Fauna, for he did not seem to have made up his mind whether it should be referred to the *interrupta* of Latreille, or the *maroccana*, or whether it is distinct from both of them; and, moreover, his *type* is likewise labelled with the name of "*marginecollis*." Instead of inserting a diagnosis, by which at all events the species might be recognized, the following is his elaborate account of it — "*TENTYRIA INTERRUPTA*, Latr., ou *Maroccana*. Du midi de la France et du nord de l'Afrique. Les individus que nous avons sous les yeux ne se rapportent exactement ni à l'une ni à l'autre de ces espèces, et ne semblent cependant pas devoir constituer une espèce nouvelle. Peut-être sont-ils le lien qui doit réunir les deux autres?" Considering the great liability of certain Coleoptera to become accidentally imported in trading vessels from the African coast, I feel a slight hesitation in admitting this *Tentyria* into the Catalogue at all.

(Subgenus *Eulypus*, Woll.)

*Corpus* angustum gracile, sat profunde punctatum, oculis magnis, prominentibus, regulariter reniformibus (infra vix angustatis), *antennæ pedibusque* longissimis, gracilibus, *unguiculis* valde elongatis

#### 685 *Tentyria elongata*

*T. gracilis*, angusta, atra, nitida, capite prothoraceque (illo sat densius) punctatis, illius epistomate obtuse rotundato producto, hoc convexo postice gradatim angustiore, angulis posticis acutis sed argute determinatis necnon ad latera et basin grosse marginato, elytris ellipticis postice acuminatis, profunde et sat parce punctatis,

ad latera et basin grosse marginatis, antennis pedibusque (præsertim tarsis) picescentioribus —Long corp lin 4-7

*Tentyria* (*Mesostena*) *elongata*\*, *Brulle, in Webb et Berth* (Col) 66 (1838)

*Habitat* in aenosis submaritimis Fuerteventuræ et Canariæ, ad radices plantarum juxta mare crescentium latens

This large and slender insect, with its greatly elongated limbs, would appear to reside amongst the loose sand which collects into small hillocks by drifting around the roots of shrubby plants, within a short distance of the sea-shore (though not upon the actual beach) In such situations it was taken by Mr Gray and myself about a mile to the south of Puerto de Cabras in Fuerteventura during January 1858 (in which locality I again met with it in April of the following year), and by myself, and subsequently by Dr Crotch, on the low sand-hills of Grand Canary between Las Palmas and the Isleta The Grand-Canarian specimens are, on the average, larger than the Fuerteventuran ones

#### Genus 261 PAIVÆA (nov gen)

*Instrumenta cibaria* fere ut in *Tentyridæ*, sed corpus aliter constructum pilisque elongatis erectis obsitum, *epistomate* ad apicem acute angulato-producto, *antennarum articulo ultimo* penultimo minore, oblique truncato, *prothorace* antice latiore, basi bisinuato, angulis posticis vix subrectis, argute determinatis, *scutello* multo brevior, se brevissimo, transverso, costiformi, *elytris* ad basin grossius marginatis, ad humeros magis angulatis, *antennis pedibusque* robustis, pilosis

*Obs* —In honorem amici mei periti, Baronis "Castello de Paiva" Lusitanici, qui scientiæ naturali deditus, solertissimus cultor ac observator acutus, per tot annos nomen Lusitanicum ornavit

Although the oral organs of nearly the whole of these immediate groups are almost similar, there can be little doubt, I think, that

\* M Brulle cites this species as a member of (what he would appear to regard as, though very erroneously, the *subgenus*) *Mesostena* It has, however (judging from the diagnosis), nothing whatever to do with that group—though, superficially, it certainly possesses the comparatively slender body of the *Mesostenæ* But the form of the eyes and the greatly elongated third joint of its antennæ (even more so, perhaps, than in the true *Tentyriæ*) entirely remove it from *Mesostena*, whilst from *Auumia* it is as readily separated by its last antennal joint being as broad as the penultimate one, as well as by its perfectly distinct scutellum and its convex body Nevertheless it is by no means a very normal *Tentyria*, and may perhaps constitute the type of a closely allied genus—its much narrower and slenderer outline and more deeply punctured surface, in combination with its larger and more prominent eyes (which are regularly reniform, and therefore but slightly contracted in their lower half), the more defined posterior angles of its prothorax, and its very much longer and thinner limbs and claws, all tending to remove it from the ordinary representatives of that group

the insect from which the above characters have been drawn is truly distinct from *Tentyria*—its external peculiarities being more than sufficient to render its isolation therefrom not only desirable, but necessary. Its two main differential features consist in its scutellum being excessively short and transverse (constituting in fact, as in *Hegeter*, a mere portion of the *marginal rim* at the base of the elytra), and in its surface being sparingly studded with long and erect hairs. In other respects, its epistome is much produced, and acute, in the centre, the terminal joint of its antennæ is considerably smaller than the preceding one, and obliquely truncated at the apex, its prothorax (which is wide anteriorly and narrowed behind) is somewhat bisinuated along the basal edge, and has the posterior angles well defined and rather acute, the humeral angles also of its elytra are sharply defined by the greatly thickened marginal rim, its entire surface is *irregularly* punctured (the punctures, which are very variable in size, being composed of a double series—large and small), and its limbs are thickened and pilose.

### 686 *Parvæa hispida*

*P. atra*, nitida, pilis elongatis erectis fulvescentibus (præsertim in elytris, sed vix in capite) parce obsita, capite sat profunde sed parce inæqualiter punctato, prothorace cordato-subquadrato, in disco convexo, ad latera et basin grosse marginato, angulis posticis acutiusculis, parcius leviusque inæqualiter punctato, elytris vix rugulosis, leviter, parce et inæqualiter punctatis (punctis majoribus obsolete subseriatim dispositis), antennis pedibusque robustis, pilosis, plus minus picescentioribus.

*Variat* punctis plus minus distinctis et inæqualibus, punctis majoribus in prothorace elytrisque interdum sat magnis, elytris sæpe obsolete subsulcatis.—Long corp. lin 4-5

*Tentyria hispida*, Brullé, in *Webb et Berth (Col)* 66 (1838)

—, *Hartung, Geolog. Verhältn. Lanz. und Fuert* 140, 141

*Habitat* Lanzarotam et Fuerteventuram, necnon in insulis parvis adjacentibus (sc. Graciosa et Lobos), sub lapidibus vulgaris.

A universal insect throughout Lanzarote and Fuerteventura (and the adjacent islands of Graciosa and Lobos), occurring beneath stones. I do not believe that it exists further westward in the archipelago, for although I have received it from Paris as Teneriffan, it was probably regarded as such through the mere fact of its having been sent from Teneriffe (even whilst obtained elsewhere in the Group). It was captured likewise by Mr Gray and M. Hartung, and from Fuerteventura it has been communicated by the Barão do Castello de Parva to whom I have had much pleasure in dedicating the genus.

Genus 262. **HEGETER**Latreille, *Hist Nat des Crust et Ins* iii 172 (1802)

Although it is possible that some few of the Hegeters enumerated below may be, in reality, but permanent varieties, rather than undoubted species, nevertheless, since I have been enabled to catch their true distinctions through the fact of my having worked them out from an enormous mass of material collected in the several islands of the Group, and since many of them have already been published by Messrs Webb and Berthelot, I think it will be more convenient to acknowledge the whole of them as of specific importance—seeing that they are for the most part sufficiently well defined, and since the admission that any of them are mere phases peculiar to certain districts would involve considerable difficulty in dealing with the remainder. Nevertheless I am far from satisfied that the genus is not essentially a variable one, and consequently suspect that certain of these forms *may* be but races, gradually matured by the local influences to which, in their own particular regions, they may happen to have been long exposed but as we have no actual proof to that effect, I do not think that it would be prudent to acknowledge them as of a lower rank than true, though at the same time nearly allied, *species*. Having taken some pains, whilst in Paris, to examine M. Brulle's types, I believe I may venture to say that his species (as re-enunciated below) are correctly identified\*

§ I *Elytra elliptica* (1 e antice et postice paulo magis angustata, quare in medio sensim magis rotundata)

687 **Hegeter tristis**

Blaps tristis, *Fab*, *Ent Syst* i 108 (1792) [see *Dom Schaum*]

— elongata, *Ohv*, *Ent* iii 60 pl i f 7 (1795)

Hegeter striatus, *Lat*, *Hist Nat des Crust et Ins* x 276 (1804)

— —, *Brulle*, in *Webb et Berth* (Col) 64 (1838)

— elongatus, *Woll*, *Ins Mad* 510 tab xi f 7 (1854)

— —, *Id*, *Cat Mad Col* 157 (1857)

*Habitat* insulas omnes Canarienses, sub lapidibus in aridis, necnon in cavernis tufæ, vulgaris

\* In my 'Ins Mad' I stated the inner maxillary lobe of *Hegeter* to be *unarmed* at the apex—an opinion which has been reiterated by Lacordaire, who reports that he also dissected the *H elongatus* (1 e *tristis*) and found that my observation was correct. It certainly was from that species that my generic formula was compiled, but I can only say that I have just now taken out the maxillæ of no less than three members of the group (namely, the *tristis*, *amaroides*, and *impressus*), besides those of the *Thalophila planifrons* and *polita*, and I find that in all instances the inner lobe is powerfully unguated at its tip, as in the allied genera. Both lobes, however, are very densely clothed with long pile, and it is probable therefore that I failed originally, no less than Lacordaire to perceive the small but acute claw which terminates the inner one of the *H tristis* on account of its having been concealed in the mass of hairs.

This is not only the largest of all the known *Hegeter*s, but by far the most widely spread. Indeed it is a remarkable fact that whilst nearly all the others are extremely local, partaking more (as it were) of the character of *races*, the present one occurs in the whole of these Atlantic Groups—having been detected in the Azores, Madeiras, Canaries, and the Cape de Verdes, as well as, also, on the northern and western coasts of Africa. Throughout the Canarian archipelago it is universal, in the whole seven islands of which I have myself captured it, except Fuerteventura and Gomeia, but from the former it has been communicated, in profusion, by the Bañero do Castello de Paiva, who obtained it sparingly from the latter also (where it was likewise met with, during the spring of 1862, by Dr. Clotch).

Apart from its much larger bulk, the *H. tristis* may be recognized by its comparatively sulcated, elliptic elytra, and by the hinder angles of its subquadrate prothorax being almost right angles. Its surface, particularly of the head and prothorax, is more or less opaque, and so minutely punctulated that the punctules are often scarcely traceable even beneath a high magnifying power. In a living state it is frequently clothed with a dull bluish-white, or lead-coloured, bloom (which however is soon destroyed)—a peculiarity to which, although I had often noticed it, my attention has lately been directed by Mr Bewicke, of Madeira.

#### 688 *Hegeter Webbianus*

*H. præcedenti similis et ab illo (nisi fallor) vix distinctus, sed minor, punctulis etiam magis indistinctis (oculo etiam fortissime armato ægre discernendis), ergo quasi impunctatus, prothorace per basin paulo magis bisinuato, angulis posticis sensim acutioribus (nec subrectis), antennis pedibusque (præsertim tarsis) subnigricantibus, tibus anticis minus evidenter serratis*—Long corp. lin 4-5

*Hegeter Webbianus, Heineken, Zool. Journ. v. 40 (1835)*

*Habitat* montes Canariæ Grandis, in regione "Tarajana" captus etiam Teneriffam apud cl. Heineken colere dicitur.

I scarcely think that this *Hegeter* is more than a race, or state, of the *tristis*, and certainly, had it been unpublished, I should not myself have treated it as anything more important, nevertheless, as I have little doubt that it is the particular form which Dr. Heineken described as the *H. Webbianus*, I am unwilling to cancel the name which he imposed upon it. It differs from the *tristis*, merely, in being smaller and (if anything) even more indistinctly punctulated still (the punctules being so barely traceable, even beneath a high magnifying power, that the surface might well be defined as "im-

punctate"), in its prothorax being a little more decidedly bisinuated along the basal edge, and consequently with the posterior angles somewhat acuter (or less evidently right angles), in its limbs (particularly the tarsi) being just perceptibly slenderer, and in its anterior tibiae being a little less roughened, or serrated. The only region in which I have myself observed it is the mountains of Grand Canary, where, during April 1858, I took it, not uncommonly, on the ascent to the Pinal above San Bartolomé

### 689 *Hegeter glaber*

*H* affinis *H* *Webbiano*, quasi (etiam oculo fortissime armato) impunctatus, prothorace apice paulo minus profunde emarginato, per basin sensim grossius marginato, scutello etiam magis transverso, elytris subconvexioribus et minus evidenter subsulcatis (sæpe omnino simplicibus), antennis pedibusque vix minus gracilibus  
*Variat* interdum subnitidus — Long corp. lin 4-6

*Hegeter glaber*, *Brulle*, in *Webb et Berth* (*Col*) 65 pl 1 f 9 (1838)

*Habitat* Palmam, hinc inde sub lapidibus

This *Hegeter*, which I have observed hitherto only in Palma, agrees with the two preceding ones in its comparatively elliptic elytra (which are rather more narrowed before and behind, and therefore somewhat more rounded in the middle), and it is of about the same size as the *H* *Webbianus*, nevertheless its prothorax is a little less scooped-out at the apex and somewhat more broadly margined along the basal edge, its scutellum is just perceptibly more transverse, its elytra are less sulcated (indeed often *quite* simple) and if anything more convex, and its limbs (especially the anterior tibiae) are perhaps a trifle less slender. Of M. Brulle's types, one pertained to this species and the other was the large variety of the *H* *amaroides*, I have therefore regarded the present one as the insect he intended to describe

### 690 *Hegeter amaroides*

*H* parum similis *H* *tristi*, sed minor (plerumque multo minor), puncturâ paulo distinctiore (sed tamen minutissimâ), prothorace subbrevisiore, antice vix angustiore, elytris sensim oblongioribus (vix ellipticis) et plerumque minus evidenter sulcatis, antennis pedibusque minus elongatis

*Variat* elytris interdum (præsertim in speciminibus majoribus) paulo magis ellipticis et fere haud sulcatis [= *H* *polito*, Br], necnon in ins *Hierro* puncturâ subdistinctiore in *Gomera* prothorax ad basin est paulo magis bisinuatus, angulis anticis vix magis porrectis

*Variat*  $\beta$  *subglabra* [an species?] Multo minor, elytris simplicibus (sulcis omnino obsoletis) — Long corp. lin 3-5½

*Hegeter amaroides*, *Sol*, *Ann de la Soc. Ent de France*, iv 378 (1835)

*Hegeter amaroides*, *Brulle, in Webb et Berth (Col)* 64 (1838)  
 — *politus*, *Id, loc cit* 65 (1838)

*Habitat* in Teneriffa, Gomera et Hierro, sub lapidibus vulgaris

This appears to be a very variable species, both in size and in its more or less evidently sulcated elytra. The larger form, which is abundant around the Puerto Orotava in Teneriffe, has the elytra sometimes a little more elliptic and shining than in the ordinary examples, and almost free from longitudinal furrows, thus manifestly approaching the *H glaber*, but after comparing accurately an immense series of specimens, I am quite unable to separate it from the smaller and more typical state, into which it merges by imperceptible gradations. Nevertheless that particular race is clearly identical with M. Brullé's *H politus*—as is evident both from his *description* and from *one* of his two types (for the other seemed to me to be specifically different). The examples from Hierro are a little more sharply punctulated than those from Teneriffe, and the Gomeran ones have their prothorax usually a trifle more bisinuated along the basal edge and with the anterior angles perhaps somewhat more porrect.

The *H amaroides* may generally be known by its being considerably smaller than the *tivistis*, by its punctation (although very minute) being a little more distinct, by its prothorax being a trifle shorter and less quadrate (being for the most part rather narrower in front than behind), by its elytra being perceptibly more oblong (or less elliptic) and somewhat less coarsely sulcated, and by its limbs being relatively shorter. I have taken it, in profusion, in Teneriffe, Gomera, and Hierro, in all three of which it was likewise found by Mr Gray, whilst from the first it has also been communicated by the Rev R. T. Lowe, the Barão do Castello de Paiva, M. Hartung, Dr Crotch, and my late friend the Rev W. J. Armitage. I believe that M. Solier's type is coincident with the smaller and more sulcated form, which is common about S<sup>ta</sup> Cruz (and elsewhere) in Teneriffe. The *smallest* state of all, however, which I have regarded as the "var  $\beta$ ," is somewhat peculiar, and possibly should have been treated as a separate species. It is *very* much smaller than the ordinary phase of the insect, and has its elytra quite simple (the sulci being obsolete). It has more the *primâ facie* aspect of the *H brevicollis* but is more elliptic in outline, and when closely inspected its prothorax will be seen to be differently shaped, and the third joint of its antennæ to be perceptibly longer. It was sent from Teneriffe by the Barão do Castello de Paiva, and was captured, I believe, either at Aiona or at Las Mercedes (probably the former).

§ II *Elytra plus minus oblongiora*691 *Hegeter transversus*

*H* oblongus, vel latus vel latiusculus, plus minus depressus, opacus, capite prothoraceque plus minus minute (sed semper evidenter) punctulatis, hujus angulis posticis subacutis, elytris basin versus plus minus latis parallelis, minutius (quasi haud) punctulatis sed plus minus irregulariter transversim subrimosis, sæpius simplicibus (rarissime obsolete subsulcatis), antennis pedibusque breviusculis, crassiusculis

$\alpha$  Major, latior, depressior, distinctius punctulatus, elytris antice sensim latioribus, rectoribus, ubique evidenter irregulariter rimulosis [*Regionibus subelevatis proprius*]

$\beta$  Minor, angustior, paulo minus depressus, minus evidenter punctulatus, elytris antice sæpius minus latis et omnino minus sculpturatis [*In regionibus minus elevatis, et etiam inferioribus, occurrens*].—Long corp lin  $3\frac{1}{2}$ –5

*Hegeter transversus*, Brulle, in Webb et Berth (Col) 65 (1838)

*Habitat* Teneriffam\* (præsertim borealem), ab orâ maritimâ usque ad 3000' vel 4000' s m ascendens  $\alpha$  et  $\beta$ , quamvis primâ facie dissimiles, nisi fallor haud distincti sunt, inter se gradatim facile mergentes

This *Hegeter*, which seems to be peculiar to Teneriffe, is quite as variable as the last one, nevertheless its two extremes of form are very easily connected. In the higher regions it is large, broad, depressed, and evidently punctulated, and its elytra are wide and parallel in front and more or less coarsely (though irregularly) transversely-scratched (or -rimose), but as we descend in elevation all

\* Dr Heer, in the list which he prepared for M Hartung's volume, has cited the *H transversus* as found in Fuerteventura, but I am satisfied that it does not exist in either of the two eastern islands of the Group (probably indeed not beyond Teneriffe), and that the error has arisen (as in other instances already commented upon) from M Hartung's having unintentionally transposed certain of his specimens from the different islands. Nevertheless the species was rightly identified by Dr Heer, for he has himself sent me an example referred correctly to the *H transversus*. It is, however, communicated as coming from "Lanzarote," even whilst he publishes the insect as a Fuerteventuran (and not as a Lanzarotan) one!—another instance of the excessive inaccuracy, displayed alike by himself and M Hartung, as regards their meagre Catalogue. The different forms of *Hegeter* (whether species or not) are so unmistakable, when accurately inspected, and so topographically restricted, that I am convinced that the specimen which he forwarded to me is strictly a Teneriffan one, and that it was probably taken in some part of the Vale of Orotava. In like manner he registers the *H brevicollis* as found in both Lanzarote and Fuerteventura, whilst I will undertake to say that it never occurred in either of them. As in the other case, it is a *Teneriffan* species, with a slightly aberrant state peculiar to Gomera. But as he has not communicated a type identified with the *brevicollis*, it is certainly possible (in this instance) that he may have fallen into a mere mistake of names, and that he in reality alludes to a totally different *Hegeter*—or, more likely, to the *Thalophilus plufrons* (which at any rate is found in Fuerteventura).

these characters are *gradually* diminished, until, in the lower districts, it is, on the average, comparatively small, and relatively not quite so broad, its sculpture is altogether finer (though never obsolete), and its elytra are not quite so parallel (or so widened) anteriorly nevertheless, after inspecting carefully an immense series of specimens, I am satisfied that the two forms merge into each other by imperceptible gradations, and therefore cannot be retained as specifically distinct. The larger state ( $\alpha$ ) is common in the wooded region of the Agua Mansa and above Ycod el Alto, and the smaller one ( $\beta$ ) is universal in the lower portions of the Vale of Orotava, around the Villa and Puerto, where it was also taken by Mr Gray and the Rev R T Lowe. From the *H amaroides* its different outline and more transverse prothorax, in conjunction with its shorter and thicker limbs (the second joint of its antennæ being, *par excellence*, less elongated), will readily separate it.

#### 692 *Hegeter brevicollis*

*H* affinis *H transverso*  $\beta$ , sed paulo minor angustior subconvexior, vix minus opacus, puncturâ etiam subtiliore (quasi omnino obsolete), prothorace ad basin minus bisinuato, angulis posticis sensim obtusioribus, ad latera æqualiter subrotundato.

*Var*  $\beta$  *gomerensis* [an species?] Subovator, paulo nitidior, puncturâ (subtilissimâ sed) forsan subdistinctiore, prothoracis angulis posticis rectis, paulo magis argute determinatis, elytris apice vix minus acute productis, antennis pedibusque sensim crassioribus [*Ins Gomera*]—Long corp. ln 3-4.

*Hegeter brevicollis*, Brulle, in *Webb et Beth* (Col) 65 (1838)

*Habitat* Teneriffam et Gomeram, varietate  $\beta$  huic propriâ.

The larger examples of this *Hegeter* approach very closely, at first sight, to the smaller ones of the " $\beta$ "-state of the *transversus*, and whilst the latter appears to occur in the intermediate regions of the Vale of Orotava in Teneriffe, not often descending to the lowest elevations, the present species I have detected hitherto only around the Puerto, at but a slight distance above the sea-level. On a careful inspection it will be observed, always, to differ from even the smallest and most aberrant varieties of the *H transversus* in being relatively a trifle narrower and more convex, in its punctuation being so excessively fine as to be barely traceable (and, therefore, strictly *obsolete*), and in its prothorax being less bisinuated along the basal edge, with the posterior angles more obtuse, and with the sides a little more *equally* rounded. It is also, on the average, smaller than even the " $\beta$ "-state of the *transversus*, and *if anything* a trifle less opaque.

Whether the Gomeran insect, which I have treated as a "var  $\beta$ " of the present one, and which was taken by Mr Gray and myself (near San Sebastian), during February 1858, and subsequently by the Rev R T Lowe (at Hermigua), should not rather be regarded as a distinct species, I am somewhat doubtful, but I believe that its differential characters are scarcely of sufficient importance to warrant the conclusion that it is more than a mere insular phasis of the *H brevicollis*. It is, however, a little more convex and ovate in outline (occasioned by the elytra being a trifle more drawn downwards, or less acuminate, at their apex), very perceptibly more shining, and with the punctation perhaps not *quite* so "obsolete", the basal angles of its prothorax, also, are better defined, and more strictly *right angles*, and its antennæ and legs are sensibly thicker.

### 693 *Hegeter abbreviatus*.

*H* latus, curtus, breviter oblongo-ovalis, capite prothoraceque sub-opacis, dense et (præsertim illo) distincte punctatis, hâc transverso angulis posticis vix obtusis, elytris ad basin truncatis (vix bisinuatis), subnitidioribus, paulo subtilius punctulatis, antennis pedibusque subgracilibus, nigro-piceis—Long corp lin  $2\frac{1}{2}$ –3

*Hegeter abbreviatus*, Brulle, in *Webb et Berth* (Col) 66 (1838)

*Habitat* in lauretis excelsioribus Canariæ Grandis, rarissimus

This is one of the best-defined of all the *Hegeters* hitherto detected, its short and broad, oblong-oval outline, combined with its distinctly and densely punctulated surface (the head and prothorax being sub-opake, whilst the elytra, which are straightly truncated at their base, are rather more shining), being abundantly sufficient to characterize it. It would appear to be exceedingly scarce, or at any rate local, the only spot in which I have observed it being the laurel-district (which forms a portion of the ancient forest of El Dorames) between Guia and Osorio in Grand Canary—where, on the 21st of April 1858, I captured eight specimens, from beneath damp stones, at the edges of the mountain-road below the house of General Morales.

### 694 *Hegeter costipennis*, n. sp.

*H* oblongo-ovatus, crassus, opacus, capite prothoraceque (præsertim hâc) impunctatus, hujus angulis posticis rectis, elytris granulatis, singulis longitudinaliter 3-costatis, costâ internâ minus elevatâ. *Variat* (an potius distinctio sexualis?) subnitidus, elytrorum granulis minus distinctis—Long corp lin 4–5

*Habitat* in montibus Canariæ Grandis, rarissimus, sub lapidibus

A most remarkable *Hegeter*, readily known by its large and thick body, opake surface, and granulated elytra, which have three elevated

costæ (the inner one of which is less raised than the others) down each. One of my specimens, however, is comparatively shining, and has its elytral granules less distinct, but whether this is due to variation, or is merely a sexual peculiarity, I am unable to state. It would appear to be the rarest of all the species hitherto detected, the only examples which I have seen (five in number) having been captured by myself on the ascent to the Roca del Soucilho, above San Mateo, in Grand Canary, during the spring of 1858.

#### 695 *Hegeter impressus*.

*H* præcedenti similis, sed minus opacus, capitis prothoracisque punctulus sensim evidentioribus (sed tamen subtilissimis, ægre observandis), elytris singulis obsolete 3-costatis, minutius granulatis, et transversim irregulariter, sed valde, rimoso-corrugatis (vel -impressis).

*Variat* (præcipue in regionibus austrialibus) paulo convexior angustior nitidior, elytris minus evidenter granulatis et costis magis numerosis (i.e. alternis minus certe obsoletis) sed omnibus valde indistinctis (interdum vix discernendis) longitudinaliter instructis — Long corp lin  $3\frac{1}{2}$ —vix 5.

*Hegeter impressus*, *Brullé*, in *Webb et Berth (Col)* 64 (1838).

*Habitat* Canariam Grandem, sub lapidibus vulgaris.

The present *Hegeter*, which seems to be almost universal in Grand Canary, and which abounds throughout the region of El Monte, is evidently nearly allied to the preceding one, whose elytral peculiarities, of minute granules and three longitudinal costæ, it possesses, but to a less extent—the diminution in degree being, as it were, compensated for by the addition of a transversely *crumpled* (or corrugated) surface. This last feature, which varies somewhat in intensity, is generally very conspicuous, being of itself sufficient to distinguish the species. The *H impressus* is a little less opaque than the *costipennis*, and the punctules of its head and prothorax, although excessively minute, are *traceable*—which is scarcely the case in its ally, except when viewed beneath the microscope. In certain districts, particularly towards the south and centre of the island (as at Arguñiguin and above San Bartolomé), it is a little narrower, convexer, and more shining, and its elytra are less evidently granuled, and have their obscure costæ (although perhaps still less apparent) rather more numerous,—the intermediate ones, which are obsolete in the normal specimens (and in the *H costipennis*), being (however faint) as distinct as the remainder. But the two forms pass into each other by imperceptible gradations.

696 *Hegeter subrotundatus*, n. sp.

*H.* affinis *H. impresso*, sed brevior, paulo rotundatior (sc. subovalis) et sensim minus opacus, capite prothoraceque distinctius punctulatis, hoc subbrevis, magis transverso, ante medium sensim latior, angulis omnibus paulo obtusioribus, elytris distincte granulatis, regulariter sed obsolete longitudinaliter sulcatis et paulo minus grosse transversim corrugatis, antennis breviusculis, robustioribus.

*Variat* [an distinctio sexualis?] prothorace antice ad latera subexplanato-marginato, aut potius juxta marginem longitudinaliter impresso (impressione ad angulos anticos oblique incurvâ) — Long. corp. ln 3 $\frac{2}{3}$ .

*Habitat* Canariam Grandem, ad Arguñiguin deprehensus.

Out of a large series of the *H. impressus* captured by myself at Arguñiguin, in the south of Grand Canary, I find three examples which recede so much from the remainder that I can scarcely regard them as a mere variety of that species—at all events not a *local* one, inasmuch as they were found in the same locality as the others. Judging from the types now before me, the *H. subrotundatus* would seem to differ from its ally in being of a shorter and rounder outline, and rather less opaque, in its head and prothorax being very much more distinctly, and rather more remotely, punctured—the latter, also, being somewhat shorter and more transverse, more evidently widened before the middle, with the angles less acute, and not so deeply bisinuated along the basal edge, and in its antennæ being thicker, with their third joint perhaps a trifle less elongated. Its elytra are perceptibly granulate, and obsoletely sulcated—causing the interstices generally (and not merely the alternate ones), as in the *variety* indicated above of the *impressus*, to appear slightly elevated. If anything, however, they are perhaps a little less corrugated transversely than is the case in that insect.

697 *Hegeter tenuipunctatus*

*H.* subopacus, subdepressus, ubique dense et minute, sed tamen distincte, punctulatus (punctulis in elytris minutissimis), prothorace transverso-subquadrato, ad latera æqualiter subrotundato, angulis posticis vix obtusis, elytris planiusculis, fere simplicibus — Long. corp. ln 3—4.

*Hegeter tenuipunctatus*?, Brulle, in *Webb et Berth* (Col.) 65 (1838).

*Habitat* in montibus valde excelsis Teneriffæ, usque ad 9000' vel 10,000' s. m. ascendens. Maio ineunte a. d. 1859 sub lapidibus prope Cañadas abundabat.

M. Brullé's types of his *H. tenuipunctatus*, which I examined in Paris, do not perfectly accord with this *Hegeter*, but I thought them

sufficiently near to render it probable that the two are specifically identical, nevertheless, if they should prove hereafter to be distinct, I would then propose for the present one the title of *ascendens*. His examples are a trifle brighter, and have their prothorax rather narrower in front and more obliquely-straightened at the sides.

The *H tenuipunctatus* (as here defined) is, like the *lateralis*, essentially an alpine insect—occurring on the mountains of Teneriffe, from about 7000 to at least 9000 (or perhaps 10,000) feet above the sea. On the lofty Cumbre above Ycod el Alto, and overlooking the Cañadas, I captured it in profusion, from beneath stones and scoræ, at the beginning of May 1859, where it was taken afterwards, though more sparingly, by Dr Crotch. The species may be known by its rather depressed body and opaque surface, which is densely and minutely (but nevertheless very evidently) punctulated all over, the punctures of the elytra, however, being exceedingly minute, by its prothorax being transversely quadrate, *equally* (though not greatly) rounded at the sides, and with the posterior angles rather more obtuse than right angles, and by its elytra being almost simple, or with scarcely any traces whatsoever of longitudinal striæ.

### 698 *Hegeter lateralis*

*H præcedenti similis, sed paulo convexior angustior nitidior, sensim magis subcylindrico-ovatus, puncturâ omnino fortiore et vix parciore, prothorace ad latera minus æqualiter rotundato (i. e. mox ante medium sensim latiore), ad basin minus evidenter bisinuato, angulis posticis subobtusioribus, elytris obsolete substriatis, ad latera paulo magis rotundatis, quare versus humeros minus parallelis.*

*Variat* (forsan secundum sexum) plus minus nitidiusculus, puncturâ plus minus grossâ et elytris plus minus evidenter substriatis — Long corp lin  $2\frac{1}{2}$ —4

*Hegeter lateralis, Brulle, in Webb et Berth (Col) 65 (1838)*

*Habitat* in montibus excelsis Teneriffæ, unâ cum specie præcedente degens

This species occurs in company with the preceding one, in almost the loftiest elevations of Teneriffe, ascending, I believe, to about 10,000 feet above the sea. Indeed I at first thought that it might perhaps be the other sex of that insect, but on a closer inspection I perceive that its differences are too numerous to warrant that suspicion. It may be known from it by being, on the average, a little convexer, narrower, and more shining, having more of a *subcylindrico-ovate* outline than an oblong one, by its punctation being altogether stronger, and perhaps a trifle less dense, by its prothorax being

rather less *equally* rounded at the sides (or somewhat wider *before* the middle than behind it), less bisinuated along the basal edge, and with the hinder angles therefore perceptibly more obtuse, and by its elytra being very obsoletely substrated (a character, however, which varies a little in intensity), and more evidently rounded at the sides, or less parallel towards their base

### Genus 263 **THALPOPHILA**

Solier, *Ann de la Soc Ent de France*, iv 370 (1835)

Although I should not myself have regarded the four insects enumerated below as more than aberrant *Hegeter*s, for the accommodation of which a separate Section might perhaps be desirable, nevertheless, since they all have their epistome armed in the centre with a minute tooth, and the first of them is likewise remarkable for the greatly developed longitudinal plait on either side of its forehead (adjoining the eye), I think that they may safely be referred to Solier's genus *Thalpophila*, of which these two characters appear, from the diagnosis, to constitute the essential features, and moreover as the only described member of that group (namely, the *Alis abbreviata* of Fabricius) is found in Senegal, it seems still further probable, even geographically, that these five natives of the *eastern* portion of the Canarian archipelago may be truly congeneric with the one from the African coast. If such, however, should be the case, the structural formula of *Thalpophila* will require a slight readjustment, for the lateral carinæ of the forehead, the "depressed" body, the "rounded" angles of the prothorax, the "cylindrical" antennal joints, and the "triangular" scutellum are not more expressed (except perhaps the first of them), or more *generic*, than they are in *Hegeter*. But the mucronated epistome is a character which seems to hold good in them all

§ I *Corpus sat magnum, oculus transversis, reniformibus*

#### 699 *Thalpophila plicifrons*, n sp

*T* oblongo-ovata, crassa, subopaca, minute et sat dense punctulata, capite antice grosse subangulatum mucronato, utrinque juxta oculos alte longitudinaliter plicato, prothorace ad latera parum rotundato, angulis posticis subiectis, anticis acutis, antennis pedibusque robustis — Long corp lin  $4\frac{1}{2}$ —5

*Hegeter brevicollis*?, *Hart* [nec *B.*], *Geolog Verhålln Lanz und Fuert* 140, 141

*Habitat* Fuerteventuram, sub lapidibus parum vulgaris

This species has been observed hitherto only in Fuerteventura, where it was taken by Mr Gray and myself near Puerto de Cabras

during January 1858, and subsequently by myself at Oliva in March of the following year, and I possess a specimen which was captured in the same island by M Hartung. It may readily be known by its rather large size and thick, oblong-ovate body, by its subopaque, densely punctulated surface, and by its head having the longitudinal plait on either side (adjoining the eye) greatly raised or developed. Its epistome is produced in front into a robust subangulated point, and its prothorax has the sides slightly rounded, the basal angles scarcely more than right angles, and the anterior ones acute.

700 *Thalpopphila Deyrollii*, n. sp.

*T. oblonga*, crassa, aterrima, polita, capite prothoraceque dense et (præsertim illo) sat profunde punctatis, epistomate antice minute sed acute mucronato, prothorace brevi, transverso, ad latera leviter rotundato, angulis posticis subrotundate subrectis, elytris minute punctulatis et postice plus minus evidenter sed parce tuberculatis, angulis humeralibus haud porrectis, antennis pedibusque breviusculis.

*Variat* in insulâ parvâ "Lobos" dictâ (juxta Fuerteventuram borealem) elytris grossius asperato-tuberculatis, necnon in insulâ "Graciosa" (juxta Lanzarotam borealem) puncturâ omnino subtiliore et subparciore.—Long. corp. lin. 3-4.

*Hegeter politus*, Hart [nec Br.], *Geolog. Verh. Lanz. und Fuert.* 141.

*Habitat* Lanzarotam et Fuerteventuram, sub lapidibus ubique vulgaris. Species in honorem Dom. A. Deyrolle, Parisi, Coleopterorum scrutatoris oculatissimi acuti, denominata.

Although one of M. Brullé's (two) types of his *Hegeter politus* appeared to me, when I examined them in Paris, to be perhaps referable to this insect, nevertheless, as the other was manifestly nothing but the large and subglabrous state of the *H. amarioides* (found in the Vale of Orotava), and since his description (if such indeed it may be called) applies most evidently to the latter, I cannot possibly identify the present species with his *Hegeter politus*. Moreover even that "one" example (and which has nothing in common with his "diagnosis") is labelled "Teneriffe", which renders it more than probable that even it is in reality distinct from the *Thalpopphila* now under consideration. But be this as it may, M. Brullé's few words which take the place of a description are so decidedly applicable to the Teneriffan *Hegeter* which I have recorded as a larger and somewhat more shining form of the common *amarioides*, that no number of (so-called) "types," afterwards assigned to them, could make them tally with this well-marked *Thalpopphila*, which is apparently quite peculiar to the eastern portion of the archipelago.

The *T. Deyrolli* is universal throughout Lanzarote and Fuerteventura, where it abounds, beneath stones, independently of elevation, and it occurs likewise in the small adjacent islands of Graciosa (off the extreme north of the former) and Lobos (off the extreme north of the latter). It was taken also by Mr Gray and M Hartung, and has been communicated by the Barão do Castello de Paiva. It will easily be recognized by its thick, oblong body and *shining*, intensely black surface, which is closely punctured all over and has the hinder elytral region sparingly studded with small tubercles or granules. Its epistome is sharply, but minutely, mucronated in the centre, its prothorax is short and transverse, and slightly rounded at the sides, its humeral angles (as in the two following species) are less perfect than is the case in the various allied forms above enumerated, and its limbs are short\*.

§ II *Corpus parvum, oculis minoribus, magis lateralibus (i.e. vix sub margine frontis laterali continuatis), postice oblique subcarinato-terminatis*

#### 701 *Thalpophila fuscipes*.

*T. oblonga, subopaca, nigra vel subfusco-nigra, capite prothoraceaeque dense et profunde punctatis, punctis versus latera oblongis et plus minus longitudinaliter confluentibus, illius epistomate antice minutissime serrato et in medio mucronato, hoc subtransversim quadrato angulis posticis subobtusis, elytris subtilius (sed distincte) punctulatis, antennis pedibusque piceis*—Long corp. lin 2-2 $\frac{2}{3}$

*Hegeter fuscipes, Brulle, in Webb et Beith (Col.) 66 (1838)*

—, *Hart, Geolog. Verh. Lanz. und Fuert.* 140

*Habitat* Lanzarotam et Fuerteventuram, sub lapidibus in intermedus vulgaris

This and the following species are considerably smaller than the two preceding ones, and have their eyes *comparatively* minute, as well as less reniform and more lateral—being less *transverse*, or more confined to the upper portion of the forehead, and terminated posteriorly by an oblique angulated *rim* (or a kind of obscure keel). In all of these respects, no less than in their coarsely sculptured head and prothorax, the lateral punctures of which have an evident tendency (particularly in the *T. submetallica*) to become oblong and longitudinally confluent, they make a most decided approach to the *Gnophote* from Grand Canary, enumerated below, nevertheless the peculiarity of

\* In its polished surface and general sculpture, the *T. Deyrolli* is a good deal allied, at first sight, to my *Hegeter latebricola*, from the Salvages, but that insect, which is considerably larger, is a true *Hegeter* (its epistome *not* being mucronated) and has its elytra free from tubercles, with the humeral angles, as in the *Hegeter*, generally, much more perfect.

sculpture just referred to is very much less expressed, whilst at the same time the more mucronated epistome and the fact of their prosternal lobe being *horizontal* (or not curved downwards between the anterior coxæ) will certainly remove them from *Gnophota*.

The *T. fuscipes* is common in Lanzarote and Fuerteventura, where it occurs beneath stones at intermediate elevations. Around Haria, in the north of the former, it was taken abundantly by Mr Gray and myself during January 1858, and it was likewise captured in the same island by M Hartung. It may be known by its small size, oblong outline, and but very slightly shining (often nearly opaque) surface, which is densely punctulated all over and of a less intense black than in the allied forms—having sometimes a just perceptibly brownish, or subpiceous, tinge. Its prothorax has the hinder angles slightly obtuse, and its limbs are piceous. The Fuerteventuran examples have their head and prothorax a trifle more coarsely and densely punctured than the Lanzarotan ones, and, judging from M Bullé's type, which I examined accurately when in Paris, the species was founded on a very *small* individual from Fuerteventura.

#### 702 *Thalpophila submetallica*, n. sp.

*T. præcedenti* similis, sed minor, brevior, sensim nitidior, puncturâ fortiore, elytris obsolete submetallicis, capite prothoraceque parum densius rugosiusque punctatis, punctis versus latera longitudinaliter magis confluentibus, hinc ad latera et ad angulos posticos paulo magis rotundato, elytris vix parcius punctulatis, per basin subrectius truncatis, antennis pedibusque paulo clarius rufo-piceis.

*Variat* in Fuerteventura sensim minus nitida.—Long. corp. lin.  $1\frac{1}{2}$ —2.

*Habitat* Lanzarotam et Fuerteventuam unâ cum præcedente degens.

This is the smallest of the *Thalpophila*, and one which occurs in company with the *T. fuscipes*, both in Lanzarote and Fuerteventura (where it was likewise taken by Mr Gray, and in the latter by M Hartung). At first sight it might almost be confounded with its ally, but, apart from its smaller size, it will be seen, when carefully inspected, to be more shining, and to have its elytra obscurely submetallic. Its head and prothorax are more densely and roughly sculptured, the punctures towards either side having a more evident tendency to become oblong and longitudinally confluent, the sides and hinder angles of the latter are more decidedly rounded, its elytra are somewhat more *slightly* truncate (or less bisinuated) at their base, and, *if anything*, more sparingly and sharply punctured, and its limbs are generally of a clearer hue. The Fuerteventuran examples are usually a trifle less shining than the Lanzarotan ones.

Genus 264 **GNOPHOTA.**Erichson, in *Wieg Archiv*, 1, 237 (1843)

The very remarkable sculpture of the head and prothorax of the three insects described below led me to suspect, even before I had accurately examined them, that they might perhaps be generically distinct from the allied forms, and I now perceive that the construction of their prosternal lobe, which is suddenly curved downwards between the anterior coxæ, and their somewhat smaller eyes, which are more or less bounded posteriorly by an oblique carina, or slightly elevated rim, will clearly refer them to *Gnophota* of Erichson—a group which I believe to be confined, so far as the hitherto acknowledged members of it are concerned, to the Cape de Verdes\*. Indeed the two above-mentioned peculiarities seem to be almost the only ones, sanctioned by Erichson and Lacordaire, to separate it from *Hegeter*, but I think that the anteriorly serrated epistome (which is submucronated in the centre) should be added, and I also imagine that considerable stress ought to be laid upon the very singular sculpture of the head and prothorax—which are coarsely and closely punctured, the punctures having a greater or less tendency to become completely confluent longitudinally (especially on either side) so as to produce somewhat curved strigæ. In the *G. curta*, a type of which has been communicated to me by Schaum, this sculpture is carried to an absurd excess, but even in the Canarian representatives of the group it is conspicuously indicated

§ I *Oculi transversi, subreniformes, postice indistincte carinato-terminati*

703 *Gnophota cribricollis*

*G.* oblonga, subdepressa, subopaca, capite prothoraceque dense et valde profunde punctatis, punctis (in disco hujus exceptis) oblongis confluentibus strigas longitudinales plus minus efficientibus, hoc ad latera leviter rotundato, ad basin bisinuato, angulis posticis subobtusis, elytris minutissime et parce punctulatis, antennis pedibusque subgracilibus, piceis, illarum articulo 3<sup>ro</sup> quarto multo longiore. *Variat* elytris vel simplicibus vel obsolete substriatis, rarius subimpresso-inæqualibus.—Long corp lin 2–2½

*Hegeter cribricollis*, Brulle, in *Webb et Berth (Col)* 66 (1838)

*Habitat* Canariam Grandem, præsertim in regionibus australibus degens

\* I say the Cape de Verdes, because it is now a known fact that the collector who was sent to Angola (and who died there) stopped at those islands *en passant*, and that his material from the two countries was amalgamated, and afterwards transmitted to Europe as *Angolan*—thus occasioning an amount of confusion which a further and more accurate knowledge of the respective faunas can alone dispel

This *Gnophota* I have observed hitherto only in the central and southern districts of Grand Canary—from the region of Tarajana to Maspalomas and Arguuniguin, and although it possesses the generic peculiarity of sculpture, of its head and prothorax, which is perhaps even still more strongly expressed in the two following species it may nevertheless be known from them by being, on the *average*, larger and less shining, by its prothorax being a little less transverse, not quite so rounded at the sides and hinder angles, and more bisinuated along its basal edge, by its elytra, which are either simple or very obsoletely substriate, being much more minutely punctulated, and by its limbs being longer—its antennal joints, particularly the third one, being conspicuously more elongated. Its eyes are a little larger and more transverse (or reniform) than those of the *G. punctipennis*, being less evidently terminated behind by a slightly elevated rim, or keel.

704 *Gnophota inæqualis*, n. sp.

*G. inter cribricollum et punctipennem* aliquo modo sita, sed in oculis haud conspicue carinato-terminatis cum illâ melius congruens, capite prothoraceque (ut in *punctipenni*) densissime et valde profunde strigoso-punctatis, sed hoc ad latera paulo magis rotundato, angulis posticis rotundioribus, elytris subovatis (versus humeros sensim angustatis), subdepressis, grosse impresso-inæqualibus, argute sed parce punctulatis necnon obsoletissime (valde inconspicue) submetallico-tinctis, antennarum articulo 3<sup>ro</sup> quarto parum longiore—Long corp. lin.  $2\frac{1}{2}$

*Habitat* Canariam Grandem, tempore vernali a d. 1858 detecta

Three examples only of this *Gnophota*, which were captured by myself in Grand Canary (I have no note as to the precise spot), are, unfortunately, all that I possess to judge from, nevertheless, though to a certain extent intermediate between the *cribricollis* and *punctipennis*, I do not think that they can be regarded as a phasis of either of them. In the structure of their eyes, which are but very obscurely bounded behind by an oblique rim, as well as in their comparatively distinct scutellum, they have more in common with the former of those insects, whilst in their *very* densely and roughly sculptured head and prothorax, rather bright surface, and apparently smallish size they agree better with the latter—though the sides and hinder angles of their prothorax are still more rounded than is the case in that species. In their sharply punctured elytra, as well as in the length of their limbs, they are intermediate between the two, but in the outline of their elytra, which are perceptibly narrowed, or drawn in, at the shoulders, and which have a barely traceable sub-

metallic tinge, and which (as in the *Hegeter impressus*) are uneven, or pitted transversely with a few irregular depressions, they recede alike from both of them

§ II *Oculi laterales, minores, postice distincte carinato-terminati*

705 *Gnophota punctipennis*, n. sp.

*G.* minor et brevior quam *G. cribricollis*, necnon subconvexior, nitidior, puncturâ omnino fortiore ac paulo densiore, prothorace magis transverso, ad latera sensim magis rotundato, per basin minus bisinuato, angulis posticis paulo obtusioribus, scutello vix minore, elytris per basin rectius truncatis, interdum leviter submalleato-inæqualibus, antennis pedibusque brevioribus, vix robustioribus, illarum articulis (præsertim 3<sup>æ</sup>) conspicue minus elongatis — Long corp. lin.  $1\frac{3}{4}$ —2

*Habitat* Canariam Grandem, in regione El Monte vulgaris

This little *Gnophota* appears to be universal throughout the region of El Monte, and around Las Palmas, in Grand Canary and it may be known from the *cribricollis* by being, on the average, smaller, proportionally shorter and more convex, more shining, and more deeply and closely punctured (this last distinction being a very conspicuous one as regards the *elytra*), by its prothorax being relatively a little wider and more transverse, straighter (or less bisinuated) along the posterior edge, and with the hinder angles rather rounder, or more obtuse, by its scutellum being perceptibly smaller, its elytra more straightly truncated at their base, and its limbs shorter and somewhat more robust. The last of these characters is exceedingly evident so far as the antennal joints are concerned, the third one of which is much less decidedly elongated than in the *cribricollis*. M. Brullé manifestly alludes to this species as a mere state of his *Hegeter cribricollis*, but such could only have arisen from a most superficial inspection, and from his not having perceived its real distinctive features at all.

Genus 265 **MELANOCHRUS** (nov. gen.)

*Corpus* ovatum, curtum, convexum *epistomate* minute serrato et in medio sensim mucronato, *oculis* parvis, subrotundatis, lateralibus *prothoracæ* angustulo, transverso-subconico apice truncato, *prosterni lobo* inter coxas anticas terminato (nec producto), aut potius ibidem subito decurvo *mesosterno* antice etiam convexo (nullo modo emarginato), *scutello* distincto, triangulari-transverso *elytris* ovalibus basi truncatis, apice acuminatis, per basin marginatis, *epipleuris* subrotundatis, plicâ tenui, integrâ *Antennæ* et *instrumenta cibaria* fere ut in *Gnophotâ* et *Hegeteri*, sed illæ longius densiusque pilosæ, ant<sup>o</sup> ult<sup>mo</sup> parvo, ovali (nec oblique truncato) *Labrum* exsertum, valde pilosum, apice leviter emarginatum, angulis anticis rotundatis *Mavilla, um lobo interno* acute uncinato *Pul-*

*porum* *art* *ult*<sup>mo</sup> in *maxillaribus* securiformi-ovalis, in *labialibus* elongato-ovalis apice paulo acuminato *Mentum* transversum, ad latera valde rotundatum, apice in medio emarginatum, angulis anticis obtusis *Ligula* curta, pone mentum recondita, antice biloba et longe ciliata *Pedes* *antici* fossorii, valde robusti, *tibis* latis, compressis sed extus simplicibus, subincurvis, ad angulum internum fortiter bicalcaratis (calcar majore elongato, curvato), *posteriores* elongati, graciles, *tibis* subincurvis, *tarsis* elongatis, art<sup>o</sup> 1<sup>mo</sup> longiusculo

A *μελανοχρως* (*μέλας* et *χρόος*), atratus

The curious insect from which the above structural characters have been compiled is at once remarkable amongst the allied forms for its fossorial habits, in which respect it makes an approach to the *Eio-diadæ*, though its broad and much compressed anterior tibiæ are not palmate externally. Its body is short, convex, and elliptical-ovate, the prothorax being subconical and narrower than the elytra, and its epipleuræ are rather rounded and obtuse, and although their edges are not ciliated as is frequently the case in sand-burrowing species, its *antennæ* are nevertheless exceedingly pilose, being clothed with elongate hairs. Its epistome is minutely serrated in front and slightly mucronated in the centre, and its eyes are small, subrotundate, and lateral,—in both of which respects it agrees with *Gnophota*. Its prosternal lobe also is more in accordance with the *Gnophotæ* than with the members of the neighbouring genera—since it is not produced horizontally beyond the commencement of the anterior coxæ, but may be regarded either as there suddenly terminated, or else as so completely bent downwards as to appear so, but its mesosternum has not even a tendency to be scooped-out in front, being, on the contrary, *convex*. Its scutellum is distinct, its elytra are margined along their basal edge, and its four hinder legs are slender and elongated—all of which particulars, no less than the smallness of its eyes, its general outline, and its fossorial front tibiæ, will separate it likewise from *Oxycaia*, to which in some respects it is akin. The last joint of its antennæ, although smallish, is not obliquely truncated (as in *Hegeter* and the allied groups), neither are the under segments of its prothorax longitudinally strigose\*

#### 706 *Melanochrus* Lacordaire, n. sp.

*M.* breviter elliptico-ovatus, convexus, niger, sæpius obsoletissime (vix perspicue) submetallico-tinctus, nitidus, argute sed haud dense

\* Concerning the affinities of this insect, Prof. Lacordaire, immediately after the completion of his admirable volume on the genera of the *Heteromera*, wrote to me as follows —“C'est bien une Tentyride, et un genre nouveau voisin des *Gnophota* et des *Oxycaia*”

punctatus (punctis in elytris sensim minoribus et vix subasperatis), prothorace subconico, tenuiter marginato, angulis posticis rotundatis, antennis fulvo-pilosis pedibusque rufo-piceis — Long corp lin  $1\frac{1}{2}$ — $2\frac{1}{2}$

*Habitat* Lanzarotam et Fuerteventuram, ad radices plantarum in arenosis maritimis et submaritimis fodiens Species in honorem Prof Th Lacordaire, per tot annos Historiæ Naturalis et præsertim Entomologiæ magistri, dicata

Apparently not uncommon in certain spots, adjoining the sea-beach, in Lanzarote and Fuerteventura—where it burrows into the sand at the roots of plants, in company with the *Arthrodes subciliatus* and *costifrons*, the *Onycholips bifurcatus*, *Pentatemonus canarius*, *Saprinus lobatus*, and other insects of similar habits Under such circumstances it was taken by Mr Gray and myself, at the end of January 1858, to the south of Puerto de Cabras, in Fuerteventura, and during the spring of the following year I met with it more abundantly in the sandy region at Corralejo, at the extreme north of that island, as well as to the south of Arrecife in Lanzarote I captured an insect on the sand-hills to the south of Mogadore, on the opposite coast of Africa (close to the Emperor of Morocco's unfinished palace), which may perhaps be a second species of *Melanochinus*\*

## Fam. 65. BLAPIDÆ.

### Genus 266 BLAPS

Fabricius, *Syst Ent* 254 (1775)

#### 707 Blaps gages

*Tenebrio gages*, Linn, *Syst Nat* n 676 [script, per em, *gigas*] (1767)  
*Blaps gages*, Brulle, in *Webb et Berth (Col)* 65 (1838)

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\* The present position being the proper one for the *Alisida*, I should mention that the *Alis acuminata* of Fabricius is recorded by M Brulle as Canarian, on the evidence of specimens supposed to have been captured by Messrs Webb and Berthelot I examined them, when in Paris, but as I feel considerable doubt whether they are truly Canarian, I cannot admit the species into this Catalogue It is far from impossible that it may occur in these islands, but, at the same time, I think it much more likely that the examples were obtained (perhaps alive) at St<sup>a</sup> Cruz, having been brought over accidentally in some of the trading vessels from the coast of Africa Such importations are both natural and by no means unfrequent, and, indeed, I have now before me specimens of a large *Scaurus*, a *Pimelia*, an *Erodia*, and of the *Scarites gigas* which were picked up by Dr Crotch on the Mole at St<sup>a</sup> Cruz—*escaped from the actual steamer in which he had himself arrived from Mogadore* (the insects having been captured by himself and the sailors on the little island off that port, and afterwards allowed to run loose on board the vessel)! I conceive it very probable, therefore, that the *Alis* may have made its appearance in much the same way, or that, at all events, further evidence is necessary before it can be conscientiously cited as Canarian

*Blaps gages*, *Woll, Ins Mad* 506 (1854)

— — —, *Id, Cat Mad Col* 157 (1857)

*Habitat* in Lanzarota, Canaria, Teneriffa et Gomera, in tenebris latens

The European *B. gages*, which occurs likewise in the Madeiran Group, as well as at the Azores and on the rocks of the Salvages, will in all probability be found universal throughout these islands, nevertheless hitherto I have myself detected it only in Lanzarote, Grand Canary, and Teneriffe, but it has been communicated by the Barão do Castello de Paiva from Gomera. In Teneriffe it was taken also by M. Hartung.

#### 708 *Blaps alternans*.

*Blaps alternans*, *Brulle, in Webb et Berth (Col)* 68 (1838)

— — —, *Hartung, Geolog Verh. Lanz. und Fuert* 140

*Habitat* Lanzarotam et Fuerteventuram, sub lapidibus magnis necnon in cavernis tufæ, in montibus, congregans

This large *Blaps*, at once remarkable for its elytra being densely roughened, or asperated, and closely beset with longitudinal ridges, the alternate ones of which have a tendency to be more developed than the remainder (a peculiarity which is more expressed in some examples than in others), seems to be confined, so far at least as has been observed hitherto, to Lanzarote and Fuerteventura—where it congregates beneath slabs of stone, and in small basaltic caverns, on the mountain-slopes of intermediate elevations. Under such circumstances I have captured it in profusion on the hills above Hama, in the north of the former, in which island it was likewise found by M. Hartung.

#### 709 *Blaps similis*

*Blaps similis*, *Lat, Hist Nat Crust et Ins* x 279 (1803)

— *fatadica*, *Sturm, Deutsch Fna*, n 205 (1807)

— — —, *Brulle, in Webb et Berth (Col)* 68 (1838)

— *fatadica*, *Woll, Ins Mad* 508 (1854)

— — —, *Id, Cat Mad Col* 157 (1857)

*Habitat* Fuerteventuram et Teneriffam (circa domos), foisan ex alienis introducta

This common European insect, which occurs likewise in the Madeiran Group and at the Azores, seems to be scarce in these islands, though, being, in all probability, a mere introduction from more northern latitudes, it would very likely be found abundantly in the houses and warehouses, if carefully searched for. The only examples, however, which I happen to possess are from Fuerteventura and Teneriffe (in the latter of which it was found by M. Hartung).

## Fam. 66. PIMELIADÆ.

## Genus 267 PIMELIA

Fabricius, *Syst Ent* 251 (1775)§ I *Scutellum* (ut in *Pimeliadis* typicis) *conspicuum, postice dilatato-transversum*710 *Pimelia lutaria*.

*P* subopaca (subtilissime alutacea), pilis plus minus elongatis erectis præsertim versus latera parce obsita et pube parvâ cinereâ demissâ hinc inde (sed præcipue in limbo et postice) vestita, capite prothoraceque parce punctatis (punctis in illo parvis, in hoc minutissimis), hoc lato, postice truncato, ad latera subæqualiter rotundato, utrinque tuberculis magnis asperato, elytris ovalibus vel oblongo-ovalibus basi submarginatis (vix bisinuatis), leviter transversim rugulosis, parce sed acute asperato-tuberculatis, in limbo grosse serratis, costis tribus (præter lateralem) indistinctis, antice evanescentibus, singulis instructis, tibis in facie superiore breviter cinereo-pubescentibus—Long corp lin 6-11

*Pimelia lusania*\*, *Brulle*, in *Webb et Berth* (Col) 68 pl 1 f 11 (1838)  
— canariensis, *Hart* [nec Br], *Geolog Verhåltn Lanz und Fuert* 140, 141

*Habitat* Lanzarotam et Fuerteventuram, necnon in insula parva adjacente "Graciosa" dictâ, sub lapidibus vulgaris

This *Pimelia* is universal (and, I think I may add, the *only* one) in Lanzarote and Fuerteventura, where it abounds, independently of elevation—occurring likewise in the little island of Graciosa, off the north of the former. It was captured also both by Mr Gray and M Hartung, and was wrongly referred by Dr Heer (who prepared the list for M Hartung's volume) to Brullé's *P canariensis*—which is a totally different insect, found by Messrs Webb and Berthelot on the extreme summit of the Peak of Teneriffe

Apart from its numerous secondary characters, the *P lutaria* may

\* The inaccuracy of M Brulle's catalogue seems to extend even to the very *correcting of the press*. In the text this *Pimelia* is called "*lusania*", but it is evident that *lutaria* is the title which was intended, not merely because *it is so spelt upon the plate*, but likewise from the fact that that term is peculiarly applicable to the present species—the short whitish, decumbent pubescence with which it is partially clothed having the *primâ facie* appearance of *mud* or a kind of earthy deposit (such as the insect might have accumulated from the dry volcanic soil into which it often half-buries itself, beneath the stones, so as to remain concealed). But it is curious to observe how a blunder of this sort is apt to beget others, for Lacordaire, having apparently omitted to glance at the *plate*, and perceiving the absurdity of such a name as "*lusania*," corrects it into *lusoria*, and thus the original title which was a tolerably distinctive one is entirely lost sight of!

readily be known by its broad, very lightly punctured prothorax, and by its entire surface (particularly towards the sides) being sparingly studded with more or less elongate, erect hairs, and clothed *in parts* with a short, decumbent, cinereous under-pile, which at first sight has more the appearance of a *muddy* or earthy deposit than of anything else. Its elytra are slightly wrinkled transversely, and sharply asperated with small, remote tubercles, and have their three costæ sufficiently distinct behind, but evanescent in front.

### 711 *Pimelia canariensis*.

*Pimelia canariensis*, Brullé, in Webb et Berth (Col) 67 (1838)

*Habitat* in montibus excelsis Teneriffæ, in summo ipso monte "Pico de Teyde" (12,100' s m) a DD Webb et Berthelot deprehensa

I have not myself captured this *Pimelia*—perhaps owing to the fact that considerations of health did not permit me to ascend higher than about 9000 or 10,000 feet on the mountains of Teneriffe, for it would appear, from a note attached to the types, that it was taken by Messrs Webb and Berthelot on the summit of the "Peak" itself\*. It is the only insect, throughout the entire collection, in which I could detect any appended observation bearing upon its habits, nevertheless even that one, although of such extreme topographical interest, is of course totally ignored by M Brullé. I examined the specimens with great care, whilst in Paris, and came to the conclusion that the species is exceedingly distinct from all the others hitherto detected in these islands. It appeared roundish in outline, and clothed with a fine, short, yellowish pubescence. Its prothorax is impunctate, and each of its elytra is furnished with two beautifully defined outer rows of equal tubercles and a large raised costa nearer to the suture—the *intermediate* tubercles being rather distant, rounded, and distinct.

### 712 *Pimelia fornicata*

*Pimelia fornicata*, Hbst, *Natursyst* viii 79 tab 122 f 8 (1799)

— obesa, Sol, *Ann de la Soc Ent de France*, v 191 (1836)

— —, Brulle, in Webb et Berth (Col) 67 (1838)

*Habitat*?

I have not observed this Mediterranean species at the Canaries, nevertheless I examined carefully the types of Messrs Webb and Berthelot, when in Paris, and they seemed to me to be correctly identified with the *fornicata*. M Brullé, who compiled the list for Messrs Webb and Berthelot's work, of course gives no information

\* The note to which I allude is as follows "Sous les pierres ou dans des cavités souterraines depuis des cotes jusque sur le pic, à 1600 toises d'élévation"

concerning the specimens, so that I am unable to state in which of the seven islands they were obtained

713 *Pimelia ascendens*, n. sp.

*P.* subnitida, capite antice transversim subelevato et ibidem profunde punctato, prothorace apice subsinuato, minutissime et parcissime punctulato, utrinque tuberculis magnis obsito, elytris oblongo-ovalibus apice subacuminatis, grosse et dense subasperato-tuberculatis, in limbo leviter seriatis, singulis costis tribus (præter lateralem) latis obtusis sed valde distinctis (sublateralibus tuberculato-subseriatis, sed discali et subsuturali simplicibus, postice subito abbreviatis), instructis, antennis tarsisque piceis—Long corp. lin 8½–11

*Pimelia barbara*, Br. [nec Sol.], in *Webb et Berth* (Col.) 67 (1838)

*Habitat* in montibus excelsis Teneriffæ, usque ad 10,000' s. m. ascendens

This is essentially an alpine *Pimelia*, being confined (so far as I have observed hitherto) to almost the loftiest elevations of Teneriffe—ascending to at least 10,000 feet above the sea. Under such circumstances I took it in profusion, at the beginning of May 1859, on the Cumbre adjoining the Cañadas, above Ycod el Alto, where it was also captured, during the spring of 1862, by Dr. Clotch, and whence it has been communicated by the Barão do Castello de Parva and M. Hartung. It may easily be known by its narrowish, oblong outline (the elytra being but little rounded at the sides, and not much drawn downwards at their apex), by its prothorax being subsinuated along the anterior edge, and by its elytra being very densely beset with large, round, coarse tubercles (which become less raised towards the suture, and smaller towards the sides), and with the three costæ, on each, considerably developed, broad, and obtuse—the sublateral one being more or less evidently composed of elongated tubercles, whilst the discal and subsutural ones are simple, and suddenly abbreviated behind.

An examination of M. Brullé's types, in Paris, convinced me that this is the *Pimelia* which he referred, in his very inaccurate catalogue, to the *P. barbara* of Solier. It is, however, totally distinct, even superficially, from that species—being not only smaller, narrower, and very much less roughly sculptured, but likewise with its prothorax conspicuously less widened, much less coarsely margined both before and behind, simply sinuated (or subemarginate) in front, instead of being somewhat bisinuated, and with only a few tubercles on either side, with its scutellum shorter, and differently shaped,

with its elytra less rounded at the edges, less raised along the suture, and with their costæ *relatively* broader and more obtuse, and with its limbs less robust—the antennæ and tarsi being also rufo-piceous instead of black

#### 714 *Pimelia radula*.

*P* præcedenti similis, sed minus oblonga (elytris rotundatioribus et postice magis desiliēti-truncatis), prothorace apice haud sinuato, elytris tuberculis paulo minoribus sed sensim magis asperatis ob-sitis, in limbo paulo minus grosse serratis, singulis costis tribus angustioribus minus elevatis (sed sublateralī et discali magis tuberculato-serratis, subsuturali antice lævi subevanescente sed postice in tuberculam parvam gradatim mergente) instructis

α Elytrorum tuberculis, præsertim versus suturam, minus distinctis [Circa *Orotavam* vulgaris]

β (*granulata*?, Lat., ined.) Elytrorum tuberculis grossius asperatis [Circa et supra *Sanctam Crucem* præcipue degens]—Long corp lin  $7\frac{1}{2}$ –10

*Pimelia radula*, Dej., ined

— —, Sol., *Ann de la Soc Ent de France*, v 136 (1836)

*Habitat* Teneriffam, præcipue in inferioribus occurrens

Whilst the last *Pimelia* is peculiar to the higher elevations of Teneriffe, this one occurs principally in the lowest (even on the level of the sea-shore), though occasionally ascending into the intermediate districts. I have taken the state “α” (which has its elytral tubercles less strongly defined) around the Puerto Orotava, and the “β” in the vicinity of St<sup>a</sup> Cruz, the latter has also been communicated by the Barão do Castello de Paiva. That it is truly conspecific with the *P radula* of Solier I can vouch for certain—having, through the kindness of M Deyrolle, received the loan of two specimens which have been compared with Solier’s types in the collection of the Count Breme at Turin. Curiously enough, one of these, which he regards as “tout-à-fait typique,” is identical with my state “α,” as enun- ciated above, whilst the other, which was labelled in the original collection of Dejean as “*radula*, var.” (though with the erroneous *habitat* of the Cape of Good Hope), is a small example of my state “β.” And this is the more satisfactory, inasmuch as I had drawn out the above diagnosis *before* I had even glanced at M Deyrolle’s individuals.

The *P radula* is less oblong than the *ascendens*, its elytra being more rounded at the sides and more bent downwards (or truncated) towards their apex, its prothorax is straighter along the anterior edge, and its elytra have their tubercles rather smaller, but a little more *obliquely-impinged* (or asperate), and their three costæ less ele-

vated, and not so broad and obtuse—the sublateral one being more serrated with denser, or closely set, tubercles, whilst even the discal one (instead of being simple) is similarly, though less coarsely, constructed the subsutural one (instead of being simple and well defined throughout, and terminated suddenly behind) is simple, and indistinct, in front, merging posteriorly into a series of small tubercles

### 715 *Pimelia sparsa*

*Pimelia sparsa*, Brulle, in Webb et Berth (Col) 67 (1838)

#### *Habitat?*

I did not meet with this insect during my Canarian researches, but I examined it, when in Paris, and do not feel altogether sure that it is more than a variety of the *radula* in which the elytral tubercles are *very* much less numerous. Still, as I could not compare it with sufficient accuracy, and since I have no example amongst my extensive series of the *radula* which at all approaches it in this peculiarity of the elytral sculpture, I do not think it would be safe, at any rate without further evidence, to treat it as a mere phasis of that species. M. Brullé, of course, gives us no information as to the island in which it was obtained

### 716 *Pimelia ambigua*, n sp

*P. subopaca*, capite antice transversim subelevato et ibidem profunde punctato, prothorace subinæquali, apice subsinuato, minutissime et parassime punctulato, utrinque (præsertim postice) tuberculis obsito, elytris oblongo-ovalibus, basi bisinuatis, antice subdepressis, suturâ haud elevatâ, dense transversim undulato-inæqualibus et tuberculis minutissimis granuliformibus (versus suturam evanescentibus) parce obsitis, in limbo subinæqualiter serratis, singulis costis tribus (præter lateralem) acutiusculis subundulato-angulatis (sublateralâ paulo evidentius serratâ) instructis —Long corp. ln 8

*Habitat* Teneriffam? (certe ab illa ad Dom<sup>um</sup> Deyrolle, Parisium, missa)

A single example of this *Pimelia* has been communicated by M. Deyrolle, of Paris, as having been sent to him from Teneriffe. Indeed it would appear from his statement that there can be no question that it is Canarian, though I will not commit myself to regarding it as undoubtedly *Teneriffan*. Its subopake and rather oblong elytra, which are bisinuated at their base, a good deal flattened anteriorly, with the suture hardly at all raised (even behind), and which are densely, though *minutely*, subrugulose (or *unmpled*) trans-

versely, so as to cause the ridges (which are narrowish and angular) to seem as though delicately subundulated, will serve to separate it from its allies. As in the *P. costipennis*, its elytral tubercles are so far reduced in dimensions as to take the form of small and remote granules (which are nearly evanescent on the sutural interval), and its subsutural ridge is rather suddenly curved outwards at the base. It appears, to a certain extent, to be intermediate between that insect and the *ascendens*, having rather the outline of the latter, with somewhat the sculpture of the former, nevertheless, of the two, it is certainly *more* akin to the *costipennis*, and might possibly be a *Teneriffan* phasis of that species.

### 717 *Pimelia costipennis*, n. sp.

*P. subnitida*, capite antice profunde, postice minute et parce punctato, prothorace minutissime et paucissime punctulato, utrinque tuberculus magnis obsito, elytris ovalibus, tuberculis parvis subasperatis granuliformibus (versus suturam minus distinctis) obsitis, in limbo leviter seriatis, singulis costis tribus (præter lateralem) valde elevatis (sublateralis indistincte tuberculato-subseriatâ) instructis, interstitiis subconcavis, antennis rufo-piceis.

$\alpha$  Paulo minor, pedibus gracilioribus, rufo-piceis [*Ins Hierro*]

$\beta$  (*validipes*) Paulo major, pedibus robustioribus, piceis [*Ins Gomera*]—Long corp. lin 7-11

*Habitat* in Gomera et Hierro, hinc inde vulgaris insectum vile, valde speinendum, in stercore humano ando sese occultare delectat.

I can detect no difference between the states  $\alpha$  and  $\beta$ , above enunciated, except that the former (which abounds in Hierro) is a little the smaller of the two, and has its limbs slenderer, whilst the latter (which is apparently general throughout Gomera) is perceptibly larger, and with the legs thicker. I therefore conclude that they are but insular phases of a single species. The " $\beta$ " was taken by Mr Gray and myself near San Sebastian, and was subsequently communicated by the Barão do Castello de Parva from Hermigua (on the opposite side of the island).

The *P. costipennis* may be known by its prothorax being very sparingly and most minutely punctulated, and by its elytra being sprinkled all over with small, but remote, granuliform tubercles (which, however, are less evident towards the suture), and with their costæ much raised—the sublateral one being indistinctly serrated (sometimes quite plain in the *middle*), whilst the discal and subsutural ones (the latter of which is faint, and a good deal bent outwards at the *base*) are simple, except quite behind. The great eleva-

tion of the ridges causes the spaces between them to appear somewhat concave

### 718 *Pimelia lævigata*

*P* præcedenti similis, sed nitidior (sæpius læte nitida), elytrorum tuberculis obsoletis (versus apicem necnon in spatio laterali solum observandis, et etiam ibidem minutissimis, granuliformibus) necnon costis antice subevanescentibus et etiam postice paulo minus elevatis, antennis pedibusque lætius rufo-piceis

*Variat* elytris leviter transversim malleatis — Long corp. ln 7-10

*Pimelia levigata*, Brulle, in Webb et Berth (Col) 67 (1838)

*Habitat* Teneriffam et Palmam, in illâ mihi haud obvia, sed in hac vulgaris

I have not myself observed this *Pimelia* except in Palma—where I captured it abundantly, during May and June of 1858, in the Barranco above S<sup>ta</sup> Cruz, nevertheless, as Messrs Webb and Berthelot's examples are labelled as coming from Teneriffe, and since I have others before me, both from M Hartung and D<sup>r</sup> Crotch, which were professedly taken in that island, I can scarcely disallow it, in my Topographical Catalogue, as a Teneriffian insect likewise. It is a well-defined species, and one which may easily be recognized by its *shining* and comparatively unsculptured surface and by the more rufescent hue of its limbs. Its elytral tubercles are quite obsolete, except towards the apex and along the lateral interval—where they are *excessively* minute, distant, and granuliform, and its costæ, although considerably raised behind, are indistinct (or subevanescent) anteriorly.

### 719 *Pimelia serrimargo*

*P* nitida vel subnitida, capite parvissime (apice distincte postice minutissime) punctato, prothorace apice sæpius subsinuato, utrinque tuberculis magnis remotis obsito necnon minoribus etiam antice et postice (vix in disco ipso) irrorato, elytris ovalibus, in limbo valde et acute serratis, singulis costis tribus (præter lateralem) plus minus distinctis (sed sæpius sublaterali acute seriata, discali multo minus elevatâ postice parce seriata, et subsuturali simplici, vel omnino vel antice solum obsoletâ) instructis, interstitiis valde remote subseriatis tuberculatis, tuberculis in spatio laterali parvis, sed versus suturam gradatim majoribus (nunc maximis verruciformibus, nunc obsoletis), tibis in facie superiore haud concavis — Long corp. ln 4½-8

*Pimelia verrucosa*, Br [nec Fisch de Waldh, 1821], in Webb et Berth (Col) 67 (1838)

*Habitat* Canariam Grandem, late diffusa species in staturâ necnon in elytrorum tuberculis, valde instabilis

So excessively variable is this *Pimelia*, both in stature and in the greater or less development of its elytral tubercles, that, were only a few examples of it present, representing the extremes, they might well be regarded as specifically distinct, nevertheless, after a most careful inspection of a large series, collected in the different districts of Grand Canary (to which island it seems to be peculiar), I am quite satisfied that they merge gradually into each other, and must all of them be referred to a single species. Apart, however, from this instability of the elytral tubercles, which are either immensely developed, and wart-like, or else obsolete (but which, when present, are always exceedingly few in number, somewhat longitudinally disposed between the costæ, and in every instance minute on the lateral interval), the insect may be known by its usually rather shining surface, by the tubercles of its prothorax being large and comparatively remote at the sides, and with a tendency to spread themselves over the rest of the surface (except the actual disc), where, however, they are smaller, and by its elytra being most roughly and sharply serrated along their margin, or lateral ridge, and with the sublateral one also similarly (though less coarsely) constructed, whilst the discal one is sparingly serrated behind but simple and indistinct in front, and the sutural one is simple, and more or less obsolete, throughout. The *P. serripennis* is, on the average, a smaller species than any of the others here enumerated, descending to a comparatively diminutive size for a *Pimelia*, and the upper face of its tibiæ is less concave.

M. Brulle's name of *verrucosa* cannot be retained for the species, it having been preoccupied for a *Pimelia* by Fischer de Waldheim in 1821.

§ II *Scutellum brevissimum, pronoto tectum* (nec pone basin elytrorum ipsissimam extendens), ergo superne vix observandum [Subg. *Aphanaspis*, Woll.]

720 *Pimelia granulicollis*, n. sp.

*P.* subopaca, capite parvissime et leviter punctato, prothorace angustulo, minus convexo, basi in medio obsoletissime (vix perspicue) angulatum subproductum, dense et minute granulato et granulis majoribus versus latera (præsertim postice) parce adperso, elytris rotundato-ovalibus, dense, sed minute et leviter, malleato-rugulosis versus latera parvissime et leviter tuberculatis (tuberculis postice in granula mergentibus), in limbo leviter serratis, singulis costis tribus (sublateralibus parum distinctâ, tuberculato-serratâ, sed discali et subsuturalibus minus elevatis, antice simplicibus) instructis, tibus in facie superiore breviter cinereo-pubescentibus.  
—Long corp. lin. 9-12

*Habitat* Canariam Grandem, in arenosis submaritimis juxta Las Palmas capta

The present species and the following one may at once be known from the others here enumerated by the somewhat anomalous fact (*for the Pimeliadæ*) of their scutellum being so completely covered by the pronotum as to be perfectly invisible from above, except when the prothorax is unnaturally bent downwards so as to leave the mesonotum exposed. It is consequently so extremely short that it does not extend in the slightest degree beyond the basal line of the elytra. I cannot, however, detect any other structural peculiarities to warrant their generic separation from the remainder.

The *P. granulicollis* is remarkable for its subopaque surface, and rather narrow, and densely and minutely granulated, prothorax. Its elytra are roundish in outline (being a good deal subtruncated posteriorly), closely and minutely, but *lightly*, uneven (or malleated), and have the *lateral* of their three costæ pretty distinct, and made up (particularly behind) of closely-set tubercles which form a serrated line, whilst the two inner ones (though well defined) are but faintly raised—the subsutural one being quite simple anteriorly, and the discal one nearly so. As in the following species and the *P. lutaria*, the upper, or concave, face of its tibiæ is densely clothed with a minute decumbent cinereous pubescence. It appears to be exceedingly rare, the only specimens which I have seen (six in number) having been captured by myself in Grand Canary—on the sand-hills between Las Palmas and the Isleta—during March 1858.

#### 721 *Pimelia auriculata*

*P. oblongior* quam præcedens, ac multo nitidior, prothorace paulo latiore convexiore, basi sensim rectius truncato, esculpturato (tuberculis lateralibus exceptis), elytris minus ruguloso-inæqualibus, sed juxta suturam grosse sed levissime transversum malleatis, granulis perpaucis minutis (versus suturam minutissimis) parcissime asperatis, singulis costâ sublateralî tubercula majora ac multo pauciora efficiente, discali vel indistinctâ (sensum serratâ) vel obsoletâ, et subsuturali obsoletâ, spatio parvo ante oculos (mox intra genas auriculatas) tibisque in facie superiore breviter cinereo-pubescentibus—Long corp. lin 8-12.

*Pimelia bajula*, Br. [nec Klug, 1830], in *Webbet Berth* (Col.) 57 (1838)

*Habitat* Canariam Grandem, hinc inde vulgaris

That this is the *Pimelia* referred by M. Brullé to the Egyptian *P. bajula* I can state for certain, having examined his specimens carefully, whilst in Paris. I have not been able to procure an example

of the *bagula* for inspection, nevertheless I am informed by Schaum, who compared accurately the Canarian insect with Klug's type in the Royal Museum at Berlin, that it is certainly distinct from the latter\*. Whether the same peculiarity of the scutellum exists in its Egyptian ally I cannot say, as I omitted to draw the attention of Schaum to that particular feature.

The *P. auriculata* is more oblong and shining than the *granulicollis*, its surface being comparatively unsculptured, its prothorax is a little wider and more convex, and, although with tubercles on either side, perfectly free from the minute granules which so densely crowd the pronotum of that insect, and its elytra are less malleated (or minutely roughened), though there are indications of a few large, but faint, transverse impressions towards the suture, most sparingly studded with a few very diminutive asperated granules (which become rather coarser towards the sides), and have their sublateral costa well developed, and composed of large but usually very remote tubercles, whilst the discal one is either very indistinct and subserrated, or else, like the subsutural one, obsolete. It appears, like the *P. granulicollis*, to be peculiar to Grand Canary, though very much more common and widely distributed over the island. Indeed it would seem to be nearly universal, since I have taken it around Las Palmas (in the extreme north), in the central district of Tajarana, and near Maspalomas (in the south). It varies a little, according to the region in which it is found.

## Fam. 67. CONIONTIDÆ.

### Genus 268 CRYPTICUS

Latreille, *Reqn. An.* (édit. 1) iii 298 (1817)

#### 722 *Crypticus punctatissimus*, n. sp.

*C.* obovato-ellipticus, subnitidus, densissime et distincte punctulatus, minute fulvo-pubescent, prothorace subconvexo, postice utrinque necnon intra angulos posticos obsolete impresso, angulis posticis acutiusculis, productis, elytris postice acutiusculis, parum distincte striato-punctatis, antennis, palpis pedibusque rufo-ferrugineis.—Long. corp. lin. 3–3½.

*Habitat* Palmam, in lauretis parum elevatis sub foliis prolapsis degens.

This large *Crypticus* I have observed hitherto only in Palma, where

\* "Your *Pimelia*," says Schaum, "is quite distinct from (though allied to) the *bagula*, Oliv., Klug. The external part of the elytra is much more scabrous in the true *bagula*, though without that conspicuous row of tubercles so remarkable in your insect."

it seems to be universal in the laurel-districts of intermediate and lofty elevations. In such situations I have taken it, from beneath stones and fallen leaves, on the ascent to the Cumbre above Buenavista, as well as high up in the Barrancos of Agua and Galga, and it was also met with in Palma by Dr Clotch. Two specimens have indeed been communicated by Prof Heer as coming from Teneriffe, but as M Hartung, who obtained them, visited Palma, and since I have already had occasion to notice the excessive inaccuracy of many of his *habitats*, I have no doubt whatsoever that these examples are in reality Palman ones. The *C punctatissimus* may be known by its large size and distinctly punctulated surface, and by its elytra being very evidently striate-punctate. Like the following species, it is minutely pubescent and navicular in outline, nevertheless it is, relatively, not *quite* so much widened at the junction of its prothorax and elytra as that insect.

#### 723 *Crypticus navicularis*.

*C ellipticus* (antice et postice magis æqualiter acutus), subopacus, densissime sed minus distincte punctulatus, minute fulvo-pubescent, prothorace postice utrinque neonon intra angulos posticos obsolete impresso, angulis posticis acutis, productis, elytris postice acutis, obsolete substriato-subpunctatis, antennis, palpis pedibusque rufo-ferrugineis — Long corp lin  $3\frac{1}{2}$

*Crypticus*? *navicularis*, Brulle, in *Webb et Berth* (Col) 69 (1838)

*Habitat* Teneriffam, in locis similibus ac præcedens, supra Tagananam captus

This *Crypticus* is closely allied to the preceding one, of which it may be regarded as the Teneriffan representative. It differs from it in being a little more *regularly* elliptic (or a trifle more *equally* attenuated before and behind), in its surface being rather more opaque, and its punctuation finer, in its prothorax (which is less convex) having the basal angles (although as much produced) perceptibly acuter, or at all events more *sharply defined*, and in its elytral striæ being both fainter and less decidedly punctured. Its posterior tibiæ are perhaps, if anything, somewhat more inwardly-curved. It inhabits precisely similar districts as the last species, only in Teneriffe instead of Palma. It would appear, however, to be scarce, the only specimens which I have captured being from the laurel-woods above Taganana. I compared them accurately, when in Paris, with M Brulle's types, with which they seemed to agree entirely.

#### 724 *Crypticus canariensis*, n. sp.

*C præcedenti* similis, sed minor, oblongior (i. e. sensim angustior ac

minus navicularis), multo minus pubescens (se fere calvus), vix magis depressus et puncturâ sensim fortiore, prothorace minus conico, angulis posticis minus productis, elytris distinctius substriato-punctatis, tarsis minus elongatis

*Variat*, in locis Teneriffæ valde elevatis, subangustior et opacior, puncturâ elytrorumque striis vix levioribus — Long corp lin  $2\frac{2}{3}$ – $3\frac{1}{3}$

*Crypticus glaber*, B. [nec Fab.], in *Webb et Berth* (Col.) 69 (1838)

*Habitat* in Teneriffa et Hierro, sub lapidibus folisque dejectis degens, per regiones sylvaticas usque ad 9000' vel etiam 10,000' s. m. ascendit

This is the common *Crypticus* of the intermediate and lofty elevations of Teneriffe, occurring beneath stones and fallen leaves. It is found likewise in Hierro, though the only example which I met with in that island (namely, in the forest-district of El Golfo) is a trifle more shining, and has its punctation just perceptibly stronger. In Teneriffe it is tolerably abundant at Las Mercedes, and more so at the Agua Garcia, the Agua Mansa, above Ycod el Alto, on the lofty Cumbre adjoining the Cañadas (where it ascends to about 9000 or perhaps even 10,000 feet above the sea), and on the opposite Cumbre, above the Agua Mansa. The specimens from these very elevated regions are, on the average, a trifle narrower and more opaque, and have their sculpture just perceptibly finer, but they shade off gradually into the others, and I have searched in vain for anything approaching to a constant difference which might serve to separate them. The species has also been communicated by the Barão do Castello de Paiva.

The *C. canariensis* is smaller and more oblong than the *navicularis*, being narrower (or less widened at the junction of its prothorax and elytra); it is a trifle less convex, and much less pubescent (being usually almost bald, except when viewed beneath a high magnifying power), its punctation and elytral striæ are a little coarser, its prothorax is less conical, and with the hinder angles less produced, and its feet are less elongated. An examination of M. Buellé's type has convinced me that it is the species which he referred (in doubt) to the European *C. glaber*. It has, however, in reality, nothing whatever in common with that insect—scarcely even its generic characters.

#### 725 *Crypticus oblongus*, n. sp.

*C. minor* quam *C. canariensis* et sensim angustior, oblongior (1 e minus ellipticus), fere omnino calvus (vix, oculo fortissime armato, etiam minute pubescens), puncturâ subtiliore necnon præsertim in elytris parciore, prothorace ad latera magis rotundato, angulis

posticis subrotundatis, obtusis (nullo modo productis), et intra angulos subintegro (rarius impresso), elytris paulo argutius striato-punctatis, pedibus sensim brevioribus, tibus anticis vix robustioribus ac magis curvatis

*Var*  $\beta$  Elytris levius striato-punctatis [*Ins Hierro*]—Long corp  
ln  $2\frac{1}{4}$ — $2\frac{1}{2}$

*Habitat* in Teneriffa et Hierro, in locis similibus ac præcedens

This species has much the same range as the *C. canariensis*—occurring, like it, in the intermediate and lofty altitudes of Teneriffe and Hierro. In the former (where it was found also by M. Hartung, and whence it has been communicated by the Barão do Castello de Parva) I have taken it abundantly at the Agua Mansa and above Ycod el Alto, and more sparingly on the elevated Cumbre overlooking the Cañadas, whilst in the latter it was captured by Mr Gray and myself near Valverde, and by myself on the grassy summit of the island above the sylvan region of El Golfo. It may at once be known from the *C. canariensis* by its smaller size and strictly *oblong* outline, by its surface being nearly free from any traces of pubescence, even when viewed under the highest magnifying power, by its punctation being finer, and (especially on the elytra) more remote, by its prothorax (which is *usually* unimpressed within the basal angles) being rounder at the sides, with the hinder angles more obtuse and *totally* unproduced, by its elytra being rather more sharply striate-punctate, and by its legs being a little shorter, with their anterior tibiæ just perceptibly robuster and more curved. The examples from Hierro differ from the Teneriffan ones merely, in having their elytra less coarsely striate-punctate.

## 726 *Crypticus minutus*

*C. affinis C. oblongo*, sed minor, angustior, sensim (præsertim in prothorace) nitidior, prothorace convexiore, ad latera magis rotundato, angulis posticis rotundatioribus, profundius densiusque punctato (punctis versus latera plus minus longitudinaliter subconfluentibus), elytris vix densius distinctusque punctulatis, sed multo levius (sc. obsolete) subpunctato-striatis, pedibus vix brevioribus et subgracilioribus—Long corp ln  $1\frac{1}{4}$

*Crypticus minutus*, Brulle, in Webb et Berth (*Col*) 69 (1838)

*Habitat* in intermediis et elevatis Canariæ Grandis, rarissimus

Two specimens only of this minute *Crypticus* (with the exception of M. Brulle's type, which I examined when in Paris) have as yet come beneath my notice. They were captured by myself, during the spring of 1858, in Grand Canary—one of them in the district of El Monte, and the other, at a high elevation on the mountains, about a mile to

the south of the Roca del Soucilho. Apart from its small bulk, the species may be recognized by its prothorax being convex, comparatively rounded both laterally and at the basal angles, and very closely punctured (the punctures being somewhat coarse *towards either side*, and with a *tendency* there to become longitudinally sub-confluent—as in the *Gnophotæ*), by its elytral striae being very faint, or nearly obsolete, and by its legs being rather short and slender. It is also a little more shining than the *C. oblongus*, especially the prothorax.

## Fam. 68. PEDINIDÆ.

Genus 269 **MELASMA** (nov. gen.)

Genus *Helopathes* affinitate proximum, sed structurâ pedum characteribusque sexualibus certe distinctum. *Corpus et instrumenta cabaria* fere ut in illo, sed *prothorace* ad apicem vix emarginato, ad basin recte truncato, angulis posticis obtusiusculis (nullo modo productis), elytris ad humeros rotundatis, deficientibus, plâ humerali tenui, superne vix observandâ. *pedibus* gracilioribus, *calcaribus tibialibus* multo minoribus, *tibus anticis* haud dilatatis, *omnibus* (in utroque sexu) intus fere calvis. In maribus, *tibus* intus (oculo fortissime armato) minutissime serratis, *anticis* ante medium spinulâ minutissimâ (ægeirime observandâ) subtus armatis, *tarsis anticis* late dilatatis, supra pilosis, subtus densissime spongiosis.

Α μέλασμα, color niger

Apart from other features, the greatly dilated fore feet of its males will at once assign this genus to the *Pedinidæ*, whilst its completely divided eyes, together with the fact of its mentum not being trilobed in front, and the hinder angles of its prothorax not being applied against the base of the elytra (within either shoulder), would all tend to identify it with *Helopathes*. The construction, however, of its legs, in both sexes (though particularly in the males), removes it entirely from that group, and even the external configuration of its prothorax and elytra—of primary importance in the *Pedinidæ*—gives it a character essentially its own. The former of these is transverse-quadrate, being almost straightly truncated both before and behind—the posterior angles being rather obtuse and without even a *tendency* to be produced, so as to rest against the base of the elytra, whilst the latter are completely rounded-off at the shoulders, with their humeral plate thin and not at all prominent. It is, however, in the legs that its main peculiarity resides, which are much slenderer than in *Helopathes*, and with their fore tibiae *not at all dilated* the tibial spurs, also, are comparatively minute. This applies equally to

both sexes, but the *males* are further remarkable for having the inner edge of their tibiae most delicately serrated, the anterior pair being additionally armed (at a considerable distance behind the apex) with an infinitesimal spinule (both it and the serrations being so small as to be barely traceable except beneath a high magnifying power) The anterior male feet are broadly dilated, sparingly pilose above, and most densely spongiose below

### 727 *Melasma lineatum*

*M* piceo-nigrum, subnitidum, ubique densissime punctatum, punctis in capite prothoraceque majoribus et ibidem plus minus longitudinaliter subconfluentibus, prothorace transverso-quadrato, tenuissime marginato, angulis posticis obtusiusculis (nullo modo productis) sed argute determinatis, ad latera æqualiter subrotundato. elytris oblongo-ovalibus (antice et postice subæqualiter angustioribus), leviter costatis, antennis pedibusque piceis — Long corp lin  $2\frac{1}{2}$ – $2\frac{3}{4}$

Phylax<sup>p</sup> lineatus, *Brulle, in Webb et Berth (Col)* 69 (1838)

— —, *Hartung, Geolog Verhalt n Lanz und Fuert* 140

*Habitat* Lanzarotam et Fuerteventuram, necnon etiam in insulâ parvâ adjacente Graciosa, sub lapidibus vulgaris

A common insect throughout Lanzarote and Fuerteventura—occurring beneath stones at most elevations, though particularly at intermediate ones, and I have taken it also in the little island of Graciosa, off the extreme north of the former In Lanzarote it was captured likewise by Mr Gray and M Hartung, and from Fuerteventura it has been communicated by the Barão do Castello de Paiva

## Fam. 69. OPATRIDÆ.

### Genus 270 CNAMEPLATIA

Costa, *Ann Aspin Nat Nap* (ser 2) 1 146 (1847)

### 728 *Cnemeplatia laticeps*

*Autoceia laticeps, Woll, Cat Mad Col* 155 fig 2 (1857)

*Habitat* Teneriffam, a cl W D Clotch semel tantum lecta

A single example of this curious and minute insect was found by Dr Clotch in Teneriffe, during the spring of 1862, and it is the only one which I have as yet seen from these islands It occurs sparingly in Madeira, and was described by myself from a specimen which I captured, in June of 1855, on the ascent from S<sup>ta</sup> Cruz to S Antonio da Seria (in the latter of which localities it has subsequently been rediscovered by Mr Bewicke) It is very closely allied to the Italian

*O. Atropos*, but differs from it in its head and prothorax being perceptibly wider—the former having the eyes more prominent and *conical*, whilst the latter is altogether a little larger, or more developed, considerably less attenuated behind, where it is of precisely the same breadth as (instead of conspicuously narrower than) the base of the elytra, merely rounded, instead of bisinuated, along the posterior edge (and therefore less *lobed* in the centre, in front of the scutellum), with the *extreme* hinder angles much less prominent, and with the two discal impressions transverse (instead of being rounded)\*

### Genus 271 SCLERUM

(Dej.) Hope, *Col Man* iii 111 [script *Scleron*] (1840)

#### 729 *Sclerum asperulum*, n sp

*S* parallelo-oblongum, squamis pallido-fuscis lutosus densissime tectum, prothorace antice lato rotundato, per basin profunde bisinuato, grosse asperato-granulato, postice utrinque longitudinaliter impresso, elytris parallelis, striato-punctatis (punctis magnis sed haud profundis), interstitiis alternis valde costato-elevatis (costis minute crenulatis), antennis pedibusque brevibus, piceis, tibis anticis extus in medio valde angulatum dilatatis—Long corp lin 2-vix 3

*Habitat* Canariam Grandem australem, prope Maspalomas reperiuntur

The mere *generic* characters of this insect, such as the greatly dilated fore tibiae and the costate alternate interstices of its elytra, added to its asperated, anteriorly-widened prothorax and densely squamose surface (the scales of which are of pale muddy-brown), will prevent its being confounded with any of the *Opatridæ* enumerated below. It appears to be both rare and extremely local—the only spot in which I have hitherto observed it being at the edges of a small water-course close to Maspalomas, in the south of Grand Canary, where, during the spring of 1858 I captured it, not uncommonly, from beneath stones

### Genus 272 OPATRUM

Fabricius, *Syst Ent* 76 (1775)

#### § I *Alis magnis*

#### 730 *Opatrum lutosum*, n sp

*O* parallelo-oblongum, dense fusco-pubescent et -squamosum, genis ante oculos valde exstantibus, angulatis, prothorace granulato,

\* Although these distinctions are small, and necessarily, therefore, somewhat difficult of observation, they are not the less *real*—being very distinct when the two species are viewed, side by side, under the microscope

utrinque explanato, ad latera rotundato sed antice sæpius paulo latiore, angulis anticis obtusiusculis, elytris punctato-striatis, antennis tarsisque breviusculis—Long corp ln  $3\frac{1}{4}$ – $4\frac{1}{4}$

*Habitat* Lanzarotam et Fuerteventuram, sub lapidibus in aridis degens

This is the common *Opatrum* of Lanzarote and Fuerteventura, where it occurs beneath stones in arid spots at low and intermediate elevations, but I have not observed it in any of the other islands of the Group. It is closely allied to the *O. fuscum*, but is on the average a trifle larger and more obtuse anteriorly, and usually more densely covered with reddish-brown mud-like scales. Its prothorax is just perceptibly wider in front, with the anterior angles less acute, and more broadly flattened at the sides, and its antennæ and tarsi are, if anything, a little shorter. Its main difference, however, consists in the development of its *genæ*, which are both more prominent and more anguliform, in front of either eye. This character is not only a constant one but likewise conspicuous, the distance from the eye to the apex of the gena being appreciably greater than it is in the *O. fuscum*.

### 731 *Opatrum fuscum*

*O.* subparallelo-oblongum, griseo-pubescentibus et -squamosum, genis ante oculos minus exstantibus, rotundato-angulatis, prothorace granulato et subtilissime ruguloso, utrinque minus explanato, ad latera æqualiter rotundato, angulis anticis acutiusculis, elytris punctato-striatis, antennis tarsisque sensim longioribus—Long corp ln 3–4

*Opatrum fuscum*, *Hbst., Kaf.* v 225 tab 52 f 1 (1793)

— *fuscum*, *Brulle, in Webb et Beith (Col.)* 68 (1838)

— *rusticum*, *Muls., Col. de France (Latig.)* 171 (1854)

— *enians*, *Woll., Ins. Mad.* 501 tab vi f 3 (1854)

— —, *Id., Cat. Mad. Col.* 156 (1857)

— *fuscum*, *Hartung, Geolog. Verhältn. Lanz. und Fuert.* 140

*Habitat* in Lanzarota, Fuerteventura, Canaria et Teneriffa, præsertim in aridis sed longe lateque diffusum

The *O. fuscum* of Mediterranean latitudes is widely spread at the Canaries, where in all probability it is universal—though hitherto it has been observed only in Lanzarote, Fuerteventura, Grand Canary, and Teneriffe. It is, on the average, a trifle smaller than the last species, and has its antennæ and feet just perceptibly longer, and it is also, for the most part, less densely clothed with mud-like scales. Its *genæ* (or lateral edges of the clypeus) are neither so prominent nor so angular—the distance being perceptibly less from either eye to their tip (which is itself a little more obtuse), and its prothorax

is, if anything, shorter, and more *equally* rounded at the sides (where it is somewhat less broadly flattened), and has the anterior angles acuter. It appears to be rather scarce in Lanzarote and Fuerteventura (in the former of which it was found likewise by Mr Gray and M Hartung), but more abundant in Grand Canary (particularly in the sandy districts near Las Palmas and Maspalomas—in the north and south, respectively), and *locally* common in Teneriffe (whence it has also been communicated by the Barão do Castello de Paiva and Dr Crotch). It is found in the Madeiran Group,—a recent, and more accurate, comparison of my *O. errans* with types of the *fuscum* having convinced me that the two are conspecific\*.

### 732 *Opatrum hispidum*

*O. elongato-oblongum*, dense et grosse griseo-vel fulvescenti-pubescentis (sed haud squamosum), genis ante oculos (magnos) rotundatis, multo minus exstantibus, prothorace brevi, transverso, profunde punctato, ad latera æqualiter vix rotundato, angulis omnibus acutis, elytris punctato-striatis.

*Mas paulo minus, tarsis intermediis articulo basilarum subtus retrorsum pectinato-setoso*—Long corp. lin.  $2\frac{1}{2}$ –3

*Opatrum tomentosum*, Dej., Cat. (edit. 3) 214 (1837)

— *hispidum*, Brulle, in Webb et Berth. (Col.) 68 (1838)

— *prolixum*, Erich., in Wiegmann Archiv., 248 (1843)

— *fuscum*, Woll. [nec Hbst.], Ins. Mad. 500 tab. vi f. 1 (1854)

— —, Id., Cat. Mad. Col. 156 (1857)

— *septentrionale*, Falderman, ined.

*Habitat* insulas omnes Canarienses, sub lapidibus, passim

I have already stated that I erroneously regarded this *Opatrum*, in my 'Ins. Mad.' as the *fuscum* (or *rusticum*) of southern Europe, which led me into the additional mistake of describing the latter as a new species (under the name of *errans*). It is, really, the *hispidum* of Brullé, and (according to M. Deyrolle) may *perhaps* be identical with the *affine* of Billberg, in which case the latter title would have the priority. That it is Erichson's *prolixum* (cited as *Angolan*, but in reality from the Cape de Verdes†) I can state for certain, having received two original types (a ♂ and ♀) of that species from Schaum. It is a common insect throughout the whole of these Atlantic Groups, abounding at the Madeiras and the Cape de Verdes. At the Canaries it is universal, I having myself captured it in the *whole seven* islands, more or less profusely. In Gomera it was found also by Mr Gray.

\* In my 'Ins. Mad.' I applied the name of *fuscum* to the wrong insect—namely, to the *hispidum* Brullé, and so fell into the error of regarding the *true fuscum* as a new species.

† *Vide supra* (p. 465, *note*.)

and Dr Crotch, in Palma by Mr Gray, and in Teneriffe by Dr Crotch and the Barão do Castello de Paiva. It occurs principally in hot and dry spots of a rather low elevation.

Its somewhat less parallel outline and short, deeply *punctured*, anteriorly narrower prothorax, in conjunction with its larger eyes, rounder and less prominent genæ, and more pubescent (though *unscaly*) surface, will, apart from the curious, backwardly-directed bristles with which the underside of the basal joint of its intermediate male feet are pectinated (a structure which I have not seen noticed, except in my 'Ins Mad'), at once separate the *O hispidum* from the other *Opatra* here enumerated.

## § II *Alis parvis, fere obsoletis*

### 733 *Opatrum oblitum*, n. sp.

*O* oblongum, subcylindricum (subtilissime, brevissime et parcissime pubescens), sed plus minus lutoso-squamosum, genis ante oculos valde exstantibus, rotundato-angulatis, prothorace parce et minute granulato (vix punctato) et subtilissime ruguloso, ante medium lato, ad latera valde rotundato, angulis anticis acutis, posticis acute subrecurvo-pinnulatis, elytris punctato-striatis, subtilissime rugulosis, antennis pedibusque clavis rufo-ferrugineis.—Long. corp. lin.  $2\frac{1}{4}$ — $2\frac{1}{2}$ .

*Habitat* Lanzarotam et Fuerteventuram, in aridis arenosis et calcareis, præsertim submaritimis, degens, necnon in insulâ parvâ Graciosa observavi.

This *Opatrum*, which has been observed hitherto only in Lanzarote and Fuerteventura, is smaller than any of the preceding ones, and *much* less pubescent—being merely besprinkled *sparsingly* with excessively diminutive decumbent setæ, though often densely covered with mud-like scales, its prothorax is of a totally different shape—being wide in front, greatly rounded at the sides, and with the *extreme* hinder angles acutely prominent, its genæ project considerably, in front of either eye, and its legs are of a more or less clear rufo-ferruginous hue. It closely resembles a species which I have received, from Nice, as the "*O pygmaeum*, Dejean" but its genæ are a little less obtuse at the apex, its prothorax has the anterior angles somewhat more porrect and acute, and the posterior ones conspicuously less prominent, its elytra are more coarsely punctate-striated, with their humeral angles much rounder (or less of *right* angles), and its wings, instead of being powerfully developed, are very small and rudimentary. I have taken it in dry, calcareous, and sandy spots, of a low elevation, in Lanzarote and Fuerteventura, particularly at a

short distance behind the sea-beach. In such situations it is not uncommon to the south of Aircife in the former, and of Puerto de Cabias in the latter (where it was likewise found by Mr Gray), and I also met with it on the little island of Graciosa, off the extreme north of Lanzarote.

### Genus 273 HALONOMUS

Wollaston, *Ann Nat Hist* vii 201 (1861)

#### 734 *Halonomus salmicola*.

*H. fusco-piceus* (fere niger), subopacus, setulis brevibus demissis cinereis minoribus, capite prothoraceque in limbo, antennis pedibusque rufescentioribus, genis ante oculos rotundatis, vix exstantibus, prothorace punctato, ad latera explanato et parum rotundato, elytris profunde et acute crenato-striatis, interstitiis minutissime et parce punctulatis.

*Var. β* Subopacior, prothorace vix angustiore et vix densius punctato [*Ins. Canaria Grandis*].—Long corp. lin.  $2\frac{1}{2}$ —vix 3.

*Halonomus salmicola*, *Woll.*, *loc. cit.* 203 (1861)

*Habitat* sub lapidibus in salinis Lanzarotæ et Canariæ (præsertim illius), valde gregarius. Species *H. ovato* (Dej.), Erich, nimis affinis et forsân ejus varietas geographica, sed genis mox ante oculos paulo minus exstantibus et minus subrecurvis necnon per marginem lateralem obliquum rectoribus (sensim minus sinuatis), prothorace ad latera vix magis rotundato, elytris sensim minus rugulosis ac multo profundius argutiusque crenato-striatis.

This insect is *very* closely allied to the *Heterophaga ovata*\* of Dejean's Catalogue (= *Opatum ovatum*, Erich, and *Halonomus Grayi*, Woll.), of which perhaps it may be only a geographical state. It appears to differ merely in having its genæ a *little* less prominent (or more obtuse), and also a little less recurved, in front of either eye, as well as a trifle *straighter* (or less sinuated) along their oblique lateral edge, in its prothorax being, perhaps, just perceptibly more rounded at the sides, and in its elytra being less evidently rugulose, and much more deeply, and sharply, crenate-striated. It was taken abundantly by Mr Gray and myself, during January 1858, from beneath stones at the edges of the Salinas, and around the salt-works,

\* This insect, which is recorded by Dejean from Senegal, occurs also in the south of Europe—a Sicilian example having been communicated to me by M. Deyrolle. It is found likewise at the Cape de Verdes, and was first *described* by Erichson, evidently from examples obtained from those islands [*vide supra*, p. 465, *note*], in his paper on (supposed) "Angolan" Coleoptera. I was unaware of this circumstance, in my enumeration of the Coleoptera of St Vincent (in the 'Ann. of Nat. Hist.' in 1861), and so re-enunciated the species under the trivial name of *Grayi*.

in the north of Lanzarote—a locality in which I again met with it in March of the following year, and I also captured a single specimen at Maspalomas, the extreme southern point of Grand Canary

Genus 274 **MELANSIS** (nov. gen.)

Genus *Phylax* proximum, sed *tibus omni<sup>7</sup>us masculis* (præsertim posterioribus) per marginem internum versus apicem minutissime sed acute serratis, *tibus anticis* in utroque sexu angustioribus (nec dilatatis) et subflexuosis, *posterioribus* in maribus subflexuosis sed in foeminis rectis, *sculpturâ* omnino fortiore, rugosiore, *elytris* alte et argute costatis, nullo modo (nec longitudinaliter nec etiam in interstitiis) punctatis

*A μέλανσις* (μελαίνω, demigio)

In their general *primâ facie* aspect and structure the two insects described below might be referred to *Phylax*, nevertheless the curious formation of their male tibiae, which are minutely serrated along the apical half of their inner edge (as in *Xenoscelis* of the *Cucujidae*), combined with other features of secondary importance—such as the narrower (or undilated) front tibiae of both sexes, their more roughly and coarsely sculptured surface, and their longitudinally *costate* elytra (which are totally free from any appearance of *punctuation*)—give them a character essentially their own. But in the shape of their prothorax, and the dentiform humeral angles of their elytra, they agree with *Phylax*.

§ I *Antennæ longiores, art<sup>o</sup> 3<sup>tho</sup> valde elongato*

735 **Melansis costata**

*M. oblonga, atra, opaca, capite prothoraceque densissime et profunde rugoso-punctatis (punctis subconfluentibus), hoc transverso, ad latera explanato rotundato, angulis anticis acutiusculis porrectis, posticis minute subprominulis, elytris subparallelis, angulis humeralibus minute exstantibus, singulis costis 7 valde elevatis argute instructis, interstitiis subtilissime densissimeque granulatis et granulis paulo majoribus obscuris obsolete et parce irroratis, antennis pedibusque præsentioribus*—Long corp. lin.  $2\frac{1}{2}$ – $3\frac{1}{2}$

*Phylax costatus, Brulle, in Webb et Berth. (Col.) 69 (1838)*

*Habitat* in montibus Canariæ Grandis, in regione “Tarajana” capta

The parallel, oblong outline, deep-black hue, and opaque surface of this insect, combined with its coarsely and densely sculptured head and prothorax, and the seven sharp and greatly raised costæ with which each of its elytra is furnished (the interstices being most closely and minutely granulated), will sufficiently distinguish it. It appears to be extremely local, and confined (so far as I have observed hitherto)

to the mountains of Grand Canary, where it occurs, beneath stones and under refuse, at a rather high elevation. In such spots I took it, not uncommonly, during April 1858, on the ascent to the Pinal above San Bartolomé, in the central region of Tarajana. I compared it carefully, when in Paris, with M. Brulle's *Phylax costatus*, with which it agreed precisely.

§ II. *Antennæ paulo breviores, art° 3<sup>to</sup> longiusculo*

736 *Melansia angulata*, n. sp.

*M.* præcedenti similis, sed minor, angustior, subovato, colore plus minus evidenter picescentiore, capite prothoraceque paulo minus opacis et vix minus dense rugoseque sculpturatis, hinc sensim longiore, angulis anticis acutioribus, ad latera minus explanato necnon ante angulos posticos (sensim exstantioribus) magis excavato, elytris vix convexioribus, tarsis brevioribus.—Long. corp. lin.  $2\frac{1}{4}$ – $2\frac{1}{2}$ .

*Habitat* Palmam, sub lapidibus in intermediis, rarissima.

Distinguished from the preceding species by, *inter alia*, its smaller size, narrower and rather less parallel outline, and less intensely black hue (the limbs being *considerably* more rufescent), by its head and prothorax being less opaque, and *rather* less densely and coarsely sculptured, by the latter being relatively longer (or less transverse), less flattened-out at the sides, with the anterior angles more porrect and acute, and the posterior ones more prominent (occasioned by the sides being more *excavated* immediately in front of them), by its elytra being somewhat less depressed, and by its antennæ and feet being a little shorter. It seems to be excessively rare, and confined to Palma—where, during June 1858, I captured about twenty examples of it, from beneath stones, high up in the Barranco above S<sup>ta</sup> Cruz.

## Fam. 70. TRACHYSCELIDÆ.

### Genus 275 PSEUDANEMIA (nov. gen.)

*Corpus et instrumenta cibaria fere ut in Anemâ, sed illud minus, in limbo calvum (nec ciliatum), capite minore, prothorace brevissimo, transverso, angulis posticis nullis, omnino rotundatis, oculorum parte superiore minore, valde demissâ, palpis etiam labialibus (ut maxillaribus) longissimis, necnon antennis certe 10- (nec 11-) articulis—art° 1<sup>mo</sup> parum elongato, ad basin gracili subflexuoso, apicem versus clavato, 2<sup>do</sup> brevioris sed vix gracilioris, 3<sup>to</sup>, 4<sup>to</sup>, 5<sup>to</sup> et 6<sup>to</sup> minutis brevibus subæqualibus, reliquis clavam elongatam abruptam 4-articulatam efficientibus.*

A ψευδος, mendacium, et *Anemia*.

Until examining recently, with great care, the unique beetle from

which the above structural diagnosis has been compiled, I had regarded it as merely a small and short *Anemia* (*Chenodes*, Dej.), with which in most respects it is identical. But an accurate inspection of its antennæ shows them to be, without doubt, only *ten*-articulate—the third joint being apparently absent\*. The few differential characters, of secondary signification, which accompany this primary feature, consist in the shape of the prothorax, which is much more abbreviated, with the hinder angles obsolete (or almost completely rounded off), in its head being narrower and less developed, with the upper division of the eyes smaller, in its labial palpi being relatively as much elongated as the maxillary pair, and in the fact of the edges of its body being bald (as in *most* of the *Phaleræ*) instead of ciliated—a character of no slight importance in a sand-burrowing insect. Of the antennal joints, the first one is rather long, slender and subflexuose at the base, and clavated at the apex, the second shorter but scarcely slenderer, the following four are minute and subequal, and the remainder constitute an abrupt, elongated, quadriarticulate club—*more* abrupt at the base than in *Anemia*. Its wings are largely developed, and its legs, as in that genus, are eminently fossorial—its tibiæ, especially the anterior pair, being powerfully bidentate (and crenulated at their base) externally.

737 *Pseudanemia brevicollis*, n. sp.

*P.* breviter oblonga, rufo-ferruginea, subnitida, supra necnon in limbo fere calva, capite prothoraceque transversim subscabroso-granulatis, hoc brevissimo, tenuiter marginato, ad latera necnon ad angulos posticos rotundato, elytris profunde subasperato-punctatis (punctis versus suturam obsoletissime subseriatim dispositis), paulo transversim rugosis, pedibus robustissimis, fossorius, tibus (præsertim anticis) extus fortiter bidentatis.—Long. corp. lin.  $1\frac{1}{2}$ .

*Habitat* Lanzarotam, in arenosis maritimis juxta Arrecife, April A.D. 1859, exemplar unicum deprehendi.

A single example of this curious insect was captured by myself in Lanzarote, during April 1859—on the low sand-hills (or, more properly, on a low sandy ridge) immediately behind the sea-beach, about a mile to the south of Arrecife.

Genus 276 **TRACHYSCELIS.**

Latreille, *Gen. Crust. et Ins.* iv. 379 (1809)

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\* I find that I am corroborated in this statement by a most admirable drawing which has been made for me by Professor Westwood, in which he has exhibited the antenna (with his usual accuracy) as composed of merely ten articulations.

738 *Trachyscelis aphodioides*

*Trachyscelis aphodioides*, *Lat, loc cit* (1809)  
 ———, *Guenin-Men, Icon, Ins* pl 31 f 3

*Habitat* Lanzarotam, Fuerteventuram et Canariam, sub fucis necnon ad radices plantarum in arenosis maritimis crescentium fodiens

This little insect of Mediterranean latitudes is locally abundant in the more eastern islands of the archipelago—burrowing beneath marine *rejectamenta* on the sea-beach, as well as at the roots of plants in the loose sand immediately behind it. In such situations I have taken it to the south of Arrecife in Lanzarote, at Cornalejo and near Puerto de Cabilas (where it was found also by Mr Gray) in Fuerteventura, and between Las Palmas and the Isleta in Grand Canary

## Fam. 71. PHALERIADÆ

## Genus 277 PHALERIA

Lateille, *Hist des Crust et Ins* iii 162 (1802)

739 *Phaleria cadaverina*

*P ovata*, subopaca, infuscatotestacea, minute punctulata (punctis in capite fortioribus), in limbo subcalva (nec ciliata), prothorace subconvexo, tenuiter marginato, ad latera subæqualiter leviter rotundato, angulis posticis subrotundato-obtusis, basi utrinque foveolâ brevissimâ punctiformi impresso, elytris convexis, profunde subcrenato-striatis, aut concoloribus aut singulis plagâ discali irregulari obscurâ nigrescente ornatis—Long corp lin  $2\frac{1}{2}$ – $2\frac{3}{4}$

Tenebrio cadaverinus, *Fab, Ent Syst* i 113 (1792)

———, *Sturm, Deutsch Ent*, ii 230 pl 47 f A (1807)

*Phaleria cadaverina*, *Steph, Ill Brit Ent* v 15 (1832)

*Habitat* Gomeram, juxta oram maritimam ad Sanctum Sebastianum, tempore vernali a D 1862, a cl W D Crotch repta

Four specimens of the common European *P cadaverina* were taken by Dr Crotch, during the spring of 1862, in Gomera, “close to the sea-shore at San Sebastian,”—the only ones which I have as yet seen from these islands

740 *Phaleria ornata*

*P præcedenti* similis, sed paulo minor, nitidior, subtilius punctulata, sensim minus convexa, in limbo ciliata, clarius testacea, elytris conspicue et lætius nigro-maculatis (maculis pleurumque maximis confluentibus, interdum elytra fere tegentibus), prothorace vix minore, ad latera minus æqualiter rotundato (basin versus sensim rectiore), angulis posticis acutius determinatis, paulo angustius marginato, elytrorum strus evidentius crenulatis

*Variat* prothorace vel immaculato, vel in disco nigrescente—Long corp ln 2-2½

*Phaleria cadaverina*, Brulle [nec Fab], in Webb et Berth (Col) 70 (1838)  
—*picta*, Woll, Ann Nat Hist vii 246 (1861)

*Habitat* in aënosis maritimis Lanzarotæ, Fuerteventuræ et Canariæ, hinc inde vulgaris

I have found it necessary to alter the trivial name of this *Phaleria*, that of *picta* having been preoccupied by Mannerheim (in 1843) for a species from Sitka. It is common on, and near, the sea-shore in Lanzarote, Fuerteventura, and Grand Canary (in the first of which it was also found by Mr Gray)—where it burrows in the sand beneath marine, and other, *rejectamenta*. It is abundantly distinct from the *P cadaverina*—not merely in colouring, but likewise in its brighter and more finely punctulated surface, in the edges of its body being conspicuously elated, and in its prothorax and elytra being, both of them, a little less convex—the latter having also their striae more evidently crenulated, whilst the former is a trifle smaller and more narrowly margined, as well as less *equally* rounded at the sides (which are straighter posteriorly, causing the hinder angles to be somewhat more sharply defined). The black discal patch of each elytron is nearly always so immensely developed that the two are confluent, and in highly coloured examples they cover (when thus united) almost the whole surface except the margins. The *P ornata* is, on the average, a trifle smaller than the *cadaverina*, its pallid portions are usually of a clearer testaceous-yellow, and its prothoracic disc is frequently much darkened. In M Brulle's inaccurate Catalogue it is referred (without even a comment) to the *cadaverina*—as I ascertained for certain, when in Paris, by an examination of Messrs Webb and Berthelot's specimens (which are normal ones of the *ornata*, and were found, according to a label appended to them, in "Grand Canary") \*

## Fam. 72. ULOMIDÆ

### Genus 278 GNATHOCERUS

Thunberg, Act Holmiens 47 (1814)

\* In general colouring the *P ornata* has a good deal in common with the *P Clarkii*, from the Cape de Verde, but that insect is more oblong and much less convex, less shining (or more coarsely alutaceous), and, like the *P cadaverina*, almost entirely free from any appearance of cilia at its edges: its prothorax is considerably smaller, quite *equally* rounded laterally, and with the basal fore deeper and more elongate, its elytra are straighter at the sides, more rectangular at the shoulders, with the dark portions differently shaped, with their striae *very* much finer, and with their interstices flatter, and its tibiae and feet are slenderer.

741 *Gnathocerus cornutus*

*Trogosita cornuta*, *Fab*, *Ent Syst Suppl* 51 (1798)

*Ulloma cornuta*, *Brulle*, in *Webb et Beith* (Col) 70 (1838)

*Cealandia cornuta*, *Woll*, *Ins Mad* 490 (1854)

— —, *Id*, *Cat Mad Col* 151 (1857)

*Habitat* in Fuerteventura, Canaria, Teneriffa, Gomeia et Hierro, in domibus officinisque pistoris, ex alienis introductus

This insect will probably be found to occur pretty generally in granaries and about houses, being (like the *Tribolium ferrugineum*) subject to constant introduction amongst farinaceous substances and other articles of commerce\* I have taken it in Fuerteventura, Grand Canary, and Hierro, and it was found in Teneriffa and Gomeia by Dr Crotch Being (as in Madeira) a mere importation from more northern latitudes, it has but little significance in our present fauna.

Genus 279 **TRIBOLIUM**

MacLeay, *Ann Javan* 47 (1825)

742 *Tribolium ferrugineum*

*Tenebrio ferrugineus*, *Fab*, *Spec Ins* 1 324 (1781)

*Tribolium castaneum*, *MacLeay*, *Ann Javan* 47 (1825)

— *ferrugineum*, *Woll*, *Ins Mad* 491 (1854)

— —, *Id*, *Cat Mad Col* 151 (1857)

*Habitat* in Fuerteventura, Teneriffa et Gomeia, certe introductum

Like the *Gnathocerus cornutus*, this insect is almost cosmopolitan, being liable to introduction, in civilized countries, amongst various articles of food and commerce Although occasionally abundant at Madeira, it appears to be scarce at the Canaries,—Fuerteventura and Teneriffa (in the latter of which it was likewise taken by the Barão do Castello de Paiva) being the only islands in which I have myself observed it It was, however, captured by Dr Crotch in Gomeia, and in all probability it will be found to be universal, if searched for in the warehouses and towns\*

Genus 280 **PSEUDOSTENE**

Wollaston, *Ann Nat Hist* vii 247 (1861)

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\* In every diagnosis to which I have had access (including my own, in the 'Ins Mad') the sexes of *Tribolium* are regarded as perfectly similar (externally) *inter se* But an accurate inspection has lately convinced me that such is not, in reality, the case,—one of them (which I presume to be the male) being not only less opaque and with its prothorax appreciably narrower behind, but having likewise its genæ just perceptibly more prominent and angular in front of either eye, and its antennal club much less abrupt, or more *gradually* formed (occasioned by the subelaval joint, or joints, being wider)

743 *Pseudostene fossoria*

*P* lineari-angusta, picea vel nigro-picea, nitida, capite dense ruguloso, antice ferrugineo, genis rotundatis (nec ante oculos exstantibus), prothorace magno, convexo, antice latiore, ad latera oblique subrotundato, sat profunde punctato, elytris angustioribus, subcylicindricis, leviter transversim rugulosis, tenuiter sed distincte punctulato-striatis, interstitiis minute punctulatis, antennis pedibusque pallide rufo-ferrugineis, tibus anticis valde dilatatis — Long corp lin  $1\frac{2}{3}$ —vix  $1\frac{3}{4}$

*Pseudostene fossoria*, *Woll*, *loc cit* 250 (1861)

*Habitat* Lanzarotam, in salinis necnon sub confervis per oram maritimam arenosam fodiens

In my Paper (above referred to) in the 'Ann of Nat Hist' for 1861, I described three nearly allied species of this genus—the *P angusta* (from the Cape de Verdes), the present one, and the *P subclavata* (from Egypt) And, alluding to their habits, I there stated that they "would seem to be more or less fossorial, living under seaweed on sandy shores, or in other salt places—a mode of life which their largely dilated anterior tibiae, accompanied by a considerable development of the prothorax, would *prima facie* indicate" In such situations I detected the *P fossoria*, during the spring of 1859, in Lanzarote—both to the south of Aircife (beneath marine *rejectamenta*) and at the Salinas (or salt-works) in the extreme north of the island It would appear, however, to be excessively rare\*

## Genus 281 ALPHITOBIUS.

Stephens, *Ill Brit Ent* v 11 (1832)

744 *Alphitobius diaperinus*

*Tenebrio diaperinus*, *Kugel in Panz Fna Ins Germ* 37 16 (1797)

— ovatus, *Hbst, Natursyst* viii (1799)

*Heterophaga opatioides*, *Dej, Cat* (edit 3) 220 (1837)

*Uloma opatioides*, *Brulle, in Webb et Berth (Col)* 70 (1838)

*Alphitobius diaperinus*, *Woll, Ins Mad* 498 (1854)

— —, *Id, Cat Mad Col* 154 (1857)

*Crypticus opatioides*?, *Hartung, Geolog Verhalten Lanz und Fuert* 142

*Habitat* Canariam et Teneriffam, in domibus mercatorumque repositoris, ex alienis introductus

This widely spread insect has been introduced into these islands, as at Madeira, occurring sparingly about houses, and amongst fari-

\* The *P angusta*, from the Cape de Verdes, is just perceptibly narrower than its Canarian ally, its prothorax is a trifle less convex, and rather *straighter* both along its lateral and basal edges (causing the posterior angles to be somewhat less obtuse), and its elytra are more lightly striated but I am exceedingly doubtful whether it is more than a mere state of the *fossoria*

naceous substances, in the villages and towns Not having thought it worth while to search in such localities, I do not happen to have observed it except in Grand Canari and Teneriffe, but in all probability it will be found generally distributed Teneriffan specimens have been communicated by the Barão do Castello de Paiva and Di Ciotch I have little doubt that it is the insect referred to in M Hartung's volume under the title of "*Crypticus opatioides*" [inserted without any *authority* to the specific name!], but how, in a work so recently published, it could possibly be assigned to *Crypticus*, with which it has really nothing whatever in common, it is difficult to conjecture Nevertheless I am the more satisfied that such is the case, inasmuch as no *Crypticus* has ever been described under the name of "*opatioides*", nor, so far as I am aware, *has any member of that genus been as yet detected* in either Lanzarote or Fuerteventura

### Genus 282 **HYPOPHLEUS.**

Fabricius, *Skizze af Natur Selsk* (1790)

§ I *Oculi magni, superne valde conspicui clypeus a fronte distincte et recte separatus elytra pygidio multo breviora*

#### 745 *Hypophleus pini.*

*H* cylindrico-linearis, rufo-ferrugineus, subnitidus, capite prothoraceoque sat dense punctulatis, illius clypeo ad latera vix elevato, hinc convexo, elongato-subquadrato, scutello parum magno, clypeis punctulatis (nec striatis), antennis brevibus, valde (præsertim in medio) incrassatis, fusiformibus, subperfoliatis, pedibus robustis, rufo-testaceis — Long corp lin  $1\frac{1}{2}$

*Hypophleus pini*, Panz, *Fna Ins Germ* 67 19

—— —, Duftsch., *Fna Austr* ii 310 (1812)

—— —, Redt, *Fna Austr* 592 (1849)

—— nocivus, Woll, *Ann Nat Hist* ix 442 (1862)

*Habitat* in pinetis Teneriffæ et Palmæ, arbores antiquas perforans

This large species, so well defined by its cylindric outline, its greatly developed eyes, its scarcely at all expanded, almost unrecurved genæ its posteriorly-shortened, uniformly punctured, unstriated elytra, and its immensely thickened, fusiform antennæ, the joints of which (*for an Hypophleus*) are rather loosely connected together, or subperfoliated, does not appear to be distinct from the European *H pini*, though I inadvertently treated it as such in the Paper above referred to It seems, in these islands, to be confined to the pine-trees of intermediate elevations, beneath the loose rotten bark of which I have taken it at the Agua Mansa in Teneriffe, and in the Barranco above Sta Cruz of Palma

§ II *Oculi minores clypeus a fronte minus evidenter et minus recte separatus elytra pygidio vix breviora*

#### 746 *Hypophlæus euphorbiæ*

*H* subfusiformi-linearis, angustus, rufo-ferrugineus, subnitidus, capite prothoraceque sat dense punctulatis, illius clypeo ad latera vix elevato, hoc elongato-subquadrato, scutello parvo, elytris levissime substriato-punctulatis, interstitiis minutissime uniseriatim punctulatis, antennis longioribus, articulis inter se parum aucte adpressis, pedibus rufo-testaceis—Long corp  $\ln \frac{3}{4}$ —vix 1

*Hypophlæus euphorbiæ*, *Woll*, *Trans Ent Soc Lond* 1 183 (1862)

*Habitat* in Lanzarota, Canaria, Teneriffa et Hierro, sub cortice *Euphorbiarum* emortuo, rarissimus

This very minute and narrow *Hypophlæus* seems to be peculiar to the rotten stems of the various *Euphorbias*—beneath the loose bark of which I have taken it in the north of Lanzarote, as also in Grand Canary, on the mountains above Sta Cruz in Teneriffe, and in the district of El Golfo on the west of Hierro. It is allied to the Madeira *H. ambiguus*, but has the edges of its clypeus somewhat less reflected, its antennæ and prothorax considerably longer (with the punctuation of the latter a little finer and more dense), its elytral striæ fainter and composed of smaller punctures, and its elytra and legs less abbreviated.

#### 747 *Hypophlæus subdepressus*, n. sp.

*H* subfusiformi-linearis, subdepressus, rufo-ferrugineus, subnitidus, capite prothoraceque sat dense punctulatis, illius clypeo ad latera (usque ad basin) elevato, oculos fere occultante, hoc transverso-subquadrato, antice sensim latiore, scutello brevi, valde transverso, elytris leviter striato-punctatis, interstitiis minutissime uniseriatim punctulatis, antennis brevissimis, articulis inter se auctissime adpressis, pedibus rufo-testaceis—Long corp  $\ln 1$

*Obs*—Species *H. depresso* Fab valde affinis, sed vix depressior, omnino levius sculpturata, punctis in prothorace elytrorumque striis sensim densioribus, clypeo etiam *postice* (i. e. supra et pone oculos) utrinque distincte elevato, oculos superne fere occultante, epistomate a clypeo minus evidenter separato, antennis etiam subbrevioribus.

*Habitat* Fuerteventuræ, in Rio Palmas sub stercore camelino (!) captus

I have unfortunately but a single individual to judge from of this small *Hypophlæus*, which was taken by myself, at the beginning of April 1859, from beneath camels' dung (!), in the Rio Palmas of Fuerteventura. It so nearly resembles, at first sight, the European *H. depressus*, that until I had examined it closely I imagined it to be

conspecific with that insect. A more accurate comparison, however, has satisfied me that, although nearly allied to the *depressus*, it is truly distinct from it—being not only a little flatter and more lightly sculptured (the punctures of its prothorax and elytral striae being likewise *denser*), but having its clypeus very perceptibly elevated not merely in front of the eyes (as in that species) but also above and *behind* them, on either side (so as more nearly to conceal them when viewed from above). The line of separation between the clypeus and epistome, which is pretty evident in its ally, is less traceable in the *subdepressus*, and the latter has its antennae, perhaps, if anything, even still shorter.

### Fam. 73. COSSYPHIDÆ.

Genus 283 COSSYPHUS.

Olivier, *Ent* iii 44 bis (1795)

748 *Cossyphus insularis*.

*Cossyphus sculus*, *Dej*, *Cat* 220 (1837)

— *insularis*, *Laporte*, *Hist des Col* ii 228 (1840<sup>p</sup>)

— —, *Breme*, *Ess sur les Cossyph* ii 16 pl 2 f 2 (1846)

*Habitat* Teneriffam, mihi non obviis

It is somewhat remarkable that I have not myself observed this insect at the Canaries, and yet that I should have received Teneriffan examples of it from no less than *four* different quarters,—namely, the Barão do Castello de Paiva (out of an old, and accurate, collection which was formed in the island many years ago), Dr Heer of Zurich (the specimens having been obtained by M Haitung), M Deyrolle of Paris, and Mr A Fry of London. They all agree perfectly, in every respect, and I have no doubt were captured in the same region (wheresoever it may have been), though, apparently, it did not fall to my lot to visit it. The species does not seem to differ, so far as I can detect, from the *C sculus* of Dejean's Catalogue—a type of which (captured by himself in Sicily) was given to me by the late Mr Melly of Liverpool.

### Fam. 74. TENEBRIONIDÆ.

Genus 284 TENEBRIO

Linnæus, *Syst Nat* edit 6 (1748)

749 *Tenebrio obscurus*.

*Tenebrio obscurus*, *Fab*, *Ent Syst* i 111 (1792)

— —, *Steph*, *Ill Brit Ent* v 8 (1832)

*Tenebrio molitor* \*<sup>2</sup>, *Brulle, in Webb et Berth (Col)* 68 (1838)

—— *obscurus, Woll, Ins Mad* 497 (1854)

—— —, *Id, Cat Mad Col* 153 (1857)

*Habitat* Fuerteventuram, Canariam, Teneiffam, Gomeram et Palmam, in domibus, granariis, et præcipue sub recremento farris circa basin acervorum tritici sparso, certe introductus

This common European *Tenebrio* (which is found also in Madeira and at the Azores) abounds at the Canaries, where it has doubtless been introduced from more northern latitudes, and where it occurs not only about houses and granaries but (more particularly) beneath the rubbish around the base of corn-stacks. In such situations I have taken it in Fuerteventura, Grand Canary, Teneriffe, and Palma, and it has been communicated from Teneriffe and Gomera by the Barão do Castello de Paiva. There can be no doubt that it must exist equally in Lanzarote and Hierro, and that it is, consequently, universal.

#### 750 *Tenebrio olivensis*, n. sp.

*T.* præcedente minor ac nitidior, scutello multo minore, triangulari (nec transversim pentagono), elytris valde profunde crenato-striatis, tibis sensim gracilioribus, capite prothoraceque dense, sat profunde et argute punctatis, hâc convexo, ad latera grosse sed ad basin tenuiter marginato, angulis anticis acutis plicatis, posticis acutissimis productis, elytris basi profunde bisinuatis, interstitiis convexis, minutissime et parce sed argute punctulatis. — Long. corp. lin. 4.

*Habitat* Fuerteventuram, Martio exeunte A. D. 1859 exemplar unum sub lapide prope Olivam collecti.

A single example of this well-marked *Tenebrio* was captured by myself, on the 31st of March 1859, in Fuerteventura—from beneath a stone, in the flat ground about half a mile to the south of Oliva. Its comparatively small size and triangular scutellum would, even of themselves, distinguish it from the *obscurus* and *molitor*, in which that organ is large and transversely pentagonal†, but it is further remarkable for the acute angles of its prothorax (which is convex, and broadly margined at the sides), and for its elytra being greatly bisinuated at their base and very deeply crenate-striate, with their

\* Although it is very possible that the common European *T. molitor* may likewise have been introduced at the Canaries, nevertheless, as neither I nor any of the collectors with whom I have been associated have detected any traces of it, whilst the *obscurus* absolutely abounds (and could scarcely, therefore, have escaped the observation of even Messrs. Webb and Berthelot), I have little doubt that the "*T. molitor*" of M. Brulle's most inaccurate list was inserted, in reality, from examples of the *obscurus*.

† Lacordaire calls it heragonal, but if the basal line be straight (as I take it to be), the scutellum of the *molitor* and *obscurus* cannot be more than a pentagon.

interstices convex and minutely (though sharply and rather sparingly) punctulated. Its head and prothorax are likewise sharply, but more closely and coarsely, punctured.

Genus 285 **BOROMORPHUS.**

Wollaston, *Ins Mad* 492 tab xi f 9 (1854)

751 **Boromorphus parvus**, n. sp.

*B.* angusto-subcylindricus, subopacus, parce sed grosse fulvescenti-cinereo-pubescent, fusco-piceus, capite prothoraceque saepius paulo rufescentioribus, densissime rugoso-punctatis (punctis longitudinaliter subconfluentibus), hoc elongato-quadrato (postice vix angustiore), elytris subparallelis, minute et levissime punctulatis (punctis indistinctis et vix longitudinaliter dispositis), antennis pedibusque rufo-testaceis.—Long. corp. lin. 1-1 $\frac{1}{4}$ .

*Obs.*—Species quam *B. tagemoides* Lucas (= *B. maderæ* Woll.) minor ac magis cylindrica, elytris antice et prothorace postice minus angustatis, oculis minoribus, puncturâ in capite prothoraceque densiore ac magis rugosâ sed in elytris subtiliore ac leviore (sc. levissimâ), antennis gracilioribus, pedibus brevioribus sed femoribus forsân sublatis.

*Habitat* in montibus Lanzarotæ, Fuerteventuræ et Teneriffæ, rarissimus.

This little *Boromorphus* seems to occur at rather lofty altitudes in the eastern and central portions of the archipelago, and is evidently very scarce. I have taken it from beneath small stones in the crevices of the rocks on the top of one of the highest hills about a mile to the south of Hania, in the north of Lanzarote, as well as on the summit of the Atalaya, above the Rio Palmas, in Fuerteventura—the most elevated mountain in that island—and a single specimen was captured by Dr. Crotch, during the spring of 1862, in Teneriffe—I believe at, or near, Ycod el Alto. It is exceedingly distinct from the *B. tagemoides*, of Mediterranean latitudes and Madeira, being smaller and more parallel, or cylindric (the bases of the prothorax and elytra being, each of them, less narrowed, or drawn in), with the punctuation of its head and prothorax denser and more rugose, whilst that of the elytra is both finer and lighter (the punctules being very obscure even under a lens), with its eyes smaller, its antennæ slenderer, and its legs shorter.

**Fam. 75. HELOPIDÆ.**

Genus 286 **HELOPS.**

Fabricius, *Syst. Ent.* 257 (1775)

752 *Helops altivagans*, n sp

*H* niger, nitidus, in clytis subopacus et obsoletissime subænescens, capite prothoraceque sat profunde et dense punctatis, illius clypeo antice late et recte truncato, utrinque ante oculos elevato et subangulatim exstante, hinc convexo, ad latera rotundato subexplanato, ante angulos posticos obtusos vix sinuato, elytris subellipticis (antice paulo angustatis), leviter et tenuiter subcrenulato-striatis, interstitiis minute et levissime punctulatis sed haud transversim rugulosis nec tuberculatis, antennis pedibusque rufo-piceis — Long corp lin 4—vix 5

*Habitat* in montibus valde excelsis Teneriffæ, usque ad 9000' s m ascendens

This *Helops* appears to be peculiar to almost the loftiest altitudes of Teneriffe, the only four specimens which I have seen having been captured by myself on the elevated Cumbre (overlooking the Cañadas) above Ycod el Alto, and on the opposite Cumbre above the Agua Mansa. It may be known by its elytra being elliptical (or a good deal drawn-in at the shoulders), in then having an exceedingly faint, just perceptible, metallic tinge, and in being very lightly and *finely* subcrenate-striated, with the interstices most minutely punctulated and scarcely at all wrinkled transversely, by its prothorax being convex, considerably rounded at the sides, and but *very* slightly sinuated in front of the hinder angles (which are obtuse), and by its clypeus being *straightly* and *broadly* truncated anteriorly, and rather conspicuously raised and prominent (or subangulated) before either eye.

753 *Helops elliptipennis*, n sp

*H* præcedenti nimis affinis, sed sensim ænescentior, puncturâ in capite prothoraceque paulo grossiore sed in elytris etiam subtiliore (ægre observandâ), clypeo antice minus recte truncato necnon ante oculos minus elevato et minus exstante, prothoracis angulis posticis obtusioribus (se valde obtusis), elytris antice vix magis angustatis, vix levius subcrenulato-striatis, interstitiis postice obsoletissime et remote seriatim tuberculatis, antennis pedibusque rufescentioribus ac paulo brevioribus — Long corp lin 4

*Habitat* Teneriffam, in sylvaticis parum elevatis degens

In its elliptic, lightly sculptured elytra and just perceptibly ænescent hue this species much resembles the preceding one, of which it is barely possible that it may be but a permanent state peculiar to the sylvan districts of a rather lower elevation. Unfortunately I have but a single example, taken by myself at the Agua Mansa in Teneriffe, to judge from, but if it be normal of its kind, the *H elliptipennis* differs from the *altivagans* in the above-mentioned pecu-

hanties being more expressed, in its clypeus being less straightly, and less widely, truncated at the apex, as well as more rounded-off (or less prominent) in front of either eye, in the hinder angles of its prothorax being still more obtuse (the sides not being *at all* sinuated immediately before them), and in its limbs being both shorter and more rufescent.

#### 754 *Helops congener*, n sp

*H* ater (interdum obsoletissime subænescens), parum nitidus, capite prothoraceque dense punctatis, hâc ad latera ante angulos posticos (vel subiectos vel obtusiusculos) plus minus evidentè sinuato, clytris plus minus profunde crenulato-striatis, interstitiis vel convexis vel planiusculis, plus minus distincte punctulatis et plus minus transversim rugulosis, versus apicem interdum obsolete seriatim tuberculatis, antennis tarsisque rufescentioribus

*α* *tungidicollis* Major, clypeo ante oculos paulo magis rotundato (minus exstante), prothorace densissime et rugose punctato, ad latera et postice subexplanato-impresso, ante angulos posticos distincte sinuato, elytrorum interstitiis convexis et sat grosse transversim rugulosis [*In elevatis sylvaticis* Palmæ]

*β* Minor, paulo minus dense rugoseque sculpturatus, prothorace sæpius æquali (rarius ad latera et postice subexplanato-impresso), ante angulos posticos vel distincte vel indistincte sinuato, elytrorum interstitiis vel convexiusculis vel depressiusculis [Teneriffa]

*γ* Punctulis in elytrorum interstitiis fere obsoletis [Hierro]

*δ* Prothorace densissime sed vix minus profunde punctato, elytrorum interstitiis versus apicem evidentius seriatim tuberculatis [*In regione El Monte* Canariæ Grandis]—Long corp. lin 3½-6

*Habitat* in Canaria, Teneriffa, Palma et Hierro, hinc inde sub lapidibus congegans

This appears to be the most widely spread of the Canarian members of the genus, and by far the most variable—having a *slightly* different phasis for nearly every district in which it occurs. It will probably be found to be universal throughout the central and western portions of the archipelago, though hitherto I have observed it only in Grand Canary, Teneriffe, Palma, and Hierro,—namely, in the region of El Monte, of the first, around Orotava, the Agua Mansa, Ycod el Alto, the Agua Garcia, Taganana, and Las Mercedes, of the second, just below the Cumbre above Buenavista, of the third, and near Valverde, of the fourth. In Teneriffe it was taken likewise by Dr Crotch and the Barão do Castello de Paiva

The larger state (*α*), which may *possibly* be distinct specifically, of the *H congener* has a certain affinity with the Madeiran *H Vulcanus*, whilst the smaller ones are still more evidently allied to the

Madeiran *confertus*—of which indeed the species might almost be regarded as a geographical modification. Apart, however, from obscure characters, the rather narrower prothorax of the *H. congener*, which is also a little less rounded, and less coarsely margined, at the sides, combined with its just perceptibly *broader* eyes (longitudinally) and its almost entire freedom from tubercles on the hinder portion of its elytral interstices (which even in the state “ $\delta$ ,” from Grand Canary, are *comparatively* but ill expressed), will serve to separate it from the (equally variable) *H. confertus*.

### 755 *Helops carbunculus*.

*H. præcedenti similis, sed paulo minor et minus ater (interdum etiam subpicescens), prothorace vix longiore, antice convexiore, ad latera minus rotundato, ante angulos posticos paulo minus evidenter sinuato sed ibidem plus minus lateraliter compresso, angulis anticis acutioribus et sensim magis porrectis, in disco plerumque paulo levius punctato, elytris vix opacioribus, levius ac magis tenuiter crenato-striatis, interstitiis sæpius subdepressis, paulo minus rugulosis ac subtilius (sc. subtilissime) punctulatis*

*Vari.  $\beta$  congesta* Prothorace ad latera ante angulos posticos etiam minus evidenter sinuato, elytris plerumque parum profundius sculpturatis [Ins Palma et Hierro]—Long corp. lin 3-4½

*Helops transversus?* Brulle\*, in Webb et Berth (Col.) 70 (1838)

—*carbunculus*, Woll, Ins Mad 519 (note) (1854)

*Habitat* in Teneriffa, Palma et Hierro, præcipue in subinferioribus degens

This *Helops* has been observed in Teneriffe, Palma, and Hierro, and was described by myself (in a foot-note of the ‘Ins Mad’) in 1854, from a specimen which was received from the first of those islands by M. Rousset, of Funchal. In Teneriffe it is the common species around Sta Cruz, and occurs likewise about the Puerto Orotava, in both of which localities (though particularly the former) I have met with it rather abundantly, and from the latter of which (where it was found by Mr Gray) it has also been communicated by the Rev R. T. Lowe and the Barão do Castello de Paiva. In Palma I captured it in the Barranco above Sta Cruz, and in Hierro, in the district of El Golfo. Although extremely variable, it is on the average a little smaller than the *H. congener*, and the larger examples of it are not

\* I examined, when in Paris, M. Brullé's types of his *H. transversus* (the “description” of which gives no clue whatsoever to the characters of any single species), and thought it barely possible that they might be conspecific with my *H. carbunculus*. Nevertheless, as I was far from satisfied about this, I do not consider it safe to identify them accordingly without further evidence. I need scarcely add, however, that if a future and more accurate inspection of them should prove the two to be coincident, M. Brullé's name will of course have the priority.

always readily separable, at first sight, from the smaller ones of that insect. Nevertheless I believe it to be truly distinct—differing from it in its less intensely black hue (which is *occasionally* even subpræcescent), and in its less shining and less coarsely sculptured elytra, the striæ of which are both *finer* and more lightly impressed, whilst the interstices (which are generally rather flattened, and but slightly rugose) are so minutely punctulated that the punctules are often barely traceable. Its prothorax is a trifle longer, and convexer anteriorly, though somewhat more *laterally-compressed* on either side before the posterior angles, its front angles are appreciably acuter and more porrect, and the punctures on its disc are usually smaller and less deep. The specimens from Palma and Hierro have their prothorax almost *unsinuated* at the sides (in front of the basal angles), and their elytra *usually* a little more coarsely sculptured.

#### 756 *Helops aterrimus*, n. sp.

*H. affinis H. canbunculo*, sed aterrimus, nitidissimus, prothorace ad apicem quasi profundius bisinuato (angulis anticis valde et acute porrectis), in disco levius subtiliusque sed versus latera densius punctato, pedibus masculis sensim crassioribus.—Long. corp. lin. 4-5½.

*Habitat* Gomeram, sub lapidibus prope Sanctum Sebastianum vulgaris.

This is the common *Helops* around, and above, San Sebastian in Gomera—where it was taken by Mr Gray and myself, from beneath stones, during February 1858. It may be known by its intensely black hue and highly polished surface, by its prothorax being lightly and finely punctured on the disc, but densely and coarsely so at the sides, with the anterior angles very porrect and acute (which causes the apical edge, when viewed from above, to appear as though deeply bisinuated), and by the thickness of its male legs.

#### 757 *Helops nitens*, n. sp.

*H. breviusculus*, obsoletissime submetallico-ater, nitidissimus, capite prothoraceque dense et profunde punctatis, hoc ad latera ante angulos posticos acute obtusiusculos vix sinuato, elytris leviter crenato-striatis, interstitiis depressis, minutissime punctulatis ac paulo transversim rugulosis, versus apicem obsolete seriatim tuberculatis, antennis pedibusque læte rufopiceis.—Long. corp. lin. vix 4.

*Habitat* Teneriffam, a W. D. Crotch semel reperiens.

A single example of this *Helops* was taken by Dr. Crotch in Teneriffe (I believe, above Ycodal Alto), during the spring of 1862. It has somewhat the shape of (though a little broader and shorter than)

the *H. congener*, with the highly polished surface of the *aterrimus* but it may be known by its deep-black hue having a faint cyaneous, or greenish-cyanous, tinge, by its prothorax being closely and coarsely punctured, almost unsinuated on either side before the posterior angles, and with the anterior ones (as in the *H. congener*) not porrect, and by its elytra having their striæ most lightly impressed, with the interstices flattened and very minutely punctulate

### 758 *Helops quadratus*

*H. picco-niger*, subænescens, nitidissimus, ubique dense punctatus, punctis in capite prothoraceque majoribus, clypeo ante oculos rotundato (nullo modo exstante), prothorace subquadrato, angulis anticis acute porrectis, quare ad apicem quasi profunde bisinuato, ad latera minus rotundato, ante angulos posticos (vel subrectos vel obtusiusculos) sat conspicue sinuato necnon utrinque pone medium lateraliter compresso, elytris leviter punctato-striatis, stius rarius evanescentibus et plerumque conspicue punctatis, antennis pedibusque pallide rufo-ferrugineis — Long corp. lin  $3\frac{1}{2}$ — $4\frac{1}{2}$

*Helops quadratus*?, Brulle, in Webb et Berth (Col) 70 (1838)

*Habitat* in montibus Canariæ Grandis, rarior

Although the types of M. Brullé's *H. quadratus*, which I examined in Paris, do not perfectly agree with my examples of this species (their elytral striæ being finer, and less evidently punctured), nevertheless they appeared to me to be sufficiently near to render it probable that they are conspecific with them, and such seems the more likely from the fact of one of my individuals having the striæ of its elytra almost evanescent. In the event, however, of the two proving hereafter to be distinct, I would then propose for the present one the trivial name of *montanus*

In its subæneo-picceous hue and shining, densely punctured surface, the *H. quadratus* (as here defined) has somewhat the *primâ facie* appearance of the common European *H. caraboides*, but the resemblance is merely a superficial one, for when more closely inspected it will be seen to have abundant characters of its own. Thus, it is more shining, and more coarsely, though rather less densely, punctured, its prothorax is a good deal longer and more quadrate, with the anterior angles much more porrect and acute, and the posterior ones less obtuse, as also straighter (and more laterally-compressed) at the sides, but more sinuated in front of the basal angles, its elytral striæ are considerably lighter (in rare instances subobsolete), though much more evidently punctured, and its eyes are differently shaped. The only locality in which I have observed it is at a high ele-

vation on the mountains of Grand Canary—namely in the Pinal above San Bartolomé, in the central region of Tarajana, where, during April 1858, I captured it not uncommonly, from beneath stones, under the fir-trees

### 759 *Helops rimosus*, n sp

*H* angustulus, niger, parum nitidus, capite prothoraceque dense punctatis, hoc ad latera subæqualiter rotundato, ante angulos posticos argute obtusos vix sinuato, elytris cylindrico-ovalibus antice angustatis, profunde crenulato-striatis, interstitiis grosse transversim rimosis sed quasi impunctatis (i. e. punctulis subtilissimis, nisi oculo fortissime armato haud discernendis), antennis pedibusque piceis, tarsis dilutionibus—Long corp ln 4½

*Obs*—*H* *congeneri* aliquo modo similis, sed angustior, elytris magis cylindricis, tamen antice angustioribus, in interstitiis multo magis transversim rugosis (sc. valde ac profunde rimosis) necnon multo subtilius punctulatis (punctulis ægerime observandis), prothorace ad latera magis æqualiter rotundato, genis vix minus exstantibus, tibus sensim gracilioribus antennarumque articulo 3<sup>to</sup> minus elongato

*Habitat* Fuerteventuram, a Dom Gray Januario exeunte a d 1858 semel tantum repertus

A single example of this distinct *Helops* was taken by Mr Gray in Fuerteventura, at the end of January 1858. Although with somewhat the *primâ facie* aspect of the *H* *congeneri*, it may easily be known by its narrowish outline and convex, though anteriorly-contracted elytra, the interstices of which are *very* coarsely wrinkled (or, rather, *cracked*, or *rimose*) transversely, but with their punctules so excessively diminutive that they are quite invisible except beneath a high magnifying power. Its prothorax is a good deal (and subequally) rounded at the sides, its tibiae are rather slender, and its third antennal joint is less elongated than is usual in the allied species

### 760 *Helops porrectus*, n sp

*H* aterrimus, nitidus, capite prothoraceque densissime sed vix profunde punctatis, hoc transverso-quadrato, ad latera minus rotundato, angulis anticis acutis porrectis (ergo ad apicem quasi profunde bisinuato), posticis subrectis (rarius obtusiusculis), per basin subarcuato-truncato, elytris profunde striato-punctatis, interstitiis minute punctulatis—Long corp ln 5-6

*Habitat* Lanzarotam borealem, rarior

The large size and shining, intensely black surface of this species, combined with its subquadrate and thickly (though not very coarsely) punctured prothorax, which has its front angles rather acute and

very porrect (causing the anterior margin, when viewed from above, to appear as though deeply bisinuated), the basal ones more or less right angles, and the sides not much rounded, will serve to distinguish it. It was taken sparingly by Mr Gray and myself, during January 1858, near Hania, in the north of Lanzarote, and again, by myself, in the spring of 1859, in the same district.

761 *Helops æthiops*, n. sp.

*H* præcedenti similis sed ad staturam minorem descendens, sæpius obsoletissime (vix perspicue) subæneo-tinctus, oculis vix majoribus, prothorace subconvexiore, ad latera magis rotundato, angulis anticis minus porrectis, posticis obtusioribus, vix parcius profundiusque punctato, per basin minus arcuato-truncato, elytrorum interstitiis plerumque etiam subminutius punctulatis.—Long. corp. lin.  $3\frac{1}{2}$ —6.

*Habitat* Lanzarotam et Fuerteventuram, sub lapidibus, passim.

In the large size of at any rate the larger examples, deep-black hue, and shining surface, this species is at first sight scarcely separable from the preceding one, nevertheless it appears to descend to a smaller stature than that insect, and the shape of its prothorax is exceedingly different—being somewhat convexer and less quadrate, with the sides rounder, the anterior angles less porrect, the posterior ones more obtuse, and its basal edge rather less arcuated. Its eyes are a trifle more developed (or longitudinally broader), its prothorax is, if anything, a little less closely and more coarsely punctured, the punctules of its interstices are, if possible, even still more minute, and its surface has very often a just perceptible ænescent tinge. It seems to be confined to Lanzarote and Fuerteventura, in both of which I have taken it, though especially the latter (where it was likewise found by Mr Gray and M. Hartung). My Fuerteventuran specimens are chiefly from the vicinity of Puerto de Cabras and Oliva, and I met with it even on the little island of Lobos, in the Bocayna Strait.

762 *Helops picescens*, n. sp.

*H* fusco-piceus, minus nitidus, capite prothoraceque densissime punctatis, hoc ad latera subæqualiter rotundato (ante angulos posticos obtusiusculos haud sinuato), elytris tenuiter punctato-striatis, interstitiis minutissime punctulatis, antennis pedibusque plus minus clare rufo-ferrugineis.

*Variat* in *Fuerteventura* prothorace vix levius parciusque punctato.—Long. corp. lin.  $2\frac{1}{2}$ —4.

*Obs*.—Species exemplaribus minoribus fere in præcedentem primâ facie mergens, sed tamen nisi fallor vere distincta in sta-

turâ haud ultra lin 4 ascendit, nec non in colore plus minus fuscescente (nec aterimo) differt, corpore sæpius minus nitido, puncturâ in capite prothoraceque subdensiore et vix subtiliore, elytris plerumque vix magis tenuiter striatis atque in interstitiis forsan subdensius distinctiusque (tamen subtilissime) punctulatis.

*Helops caraboides* ?, Brulle [nec Lum], in *Webb et Berth* (Col) 69 (1838)

*Habitat* in Lanzarote et Fuerteventura (præsertim illâ) hunc inde vulgaris

The larger examples of this *Helops* would seem, at first sight, almost to merge into the smaller ones of the *H æthiops*, yet I believe that the species are positively distinct from each other, even though extreme individuals of the two (in opposite directions) are not always readily separable—at any rate without a very accurate comparison of them. The largest specimens which I have been able to detect of the *H præsicens* are so *very* much smaller than those of the *æthiops* that in their ordinary states no species could be better defined, but, apart from this, the *much* less blackened hue of the former (which is more or less of a dark reddish-brown, with the limbs pale rufo-ferruginous), combined with its somewhat more densely and finely punctured head and prothorax, and (however minutely) *rather* more evidently punctulated elytral interstices, will additionally separate it from that insect.

The size, colour, and general appearance of this *Helops* give it slightly the *primâ facie* aspect of the European *H caraboides*, and I have little doubt that it is the species referred to that insect in M. Brullé's most inaccurate and loosely-compiled list<sup>1</sup>. The most superficial inspection of it, however, will suffice to prove that it belongs in reality to a totally different type—in which the body is always apterous, the eyes rather less developed, and the prothorax totally unflattened at the sides, whilst it is further distinguished from the *caraboides* by its longer genæ, its somewhat less closely and more coarsely punctured prothorax (which is convexer and less evidently margined), and by its elytra having their striae considerably lighter but more decidedly punctured, with the punctules of their interstices comparatively imperceptible. In the development of its male tarsi it is a little variable.

\* From Prof. Heer, of Zurich, I have received it (and so has Dr. Schaum) actually identified with the *caraboides*, and labelled as coming from "Teneriffe", whereas, in reality, it has nothing whatever to do with the *caraboides*, and most unquestionably is *not* Teneriffan! His examples were received from M. Hartung, and I myself took others of them out of M. Hartung's own boxes (by his permission), where they were (then) rightly associated with his material from *Lanzarote*.

The *H. picescens* seems to be peculiar to Lanzarote and Fuerteventura but is more common in the former than the latter. It was taken abundantly by Mr Gray and myself, during January 1858, around Hania and Magui, in the north of the former—where I again met with it in the spring of the following year, and it was likewise found (in Lanzarote), as already stated, by M Hartung. My Fuerteventuran examples are principally from the intermediate district between La Antigua and the Agua Bueyes\*.

### 763 *Helops fuscus*, n. sp.

*H. fusco-piceus*, subopacus, capite prothoraceque densissime punctatis, illius oculis (longitudinaliter) angustulis, hoc convexo, ad latera subæqualiter rotundato, mox ante angulos ipsos posticos (anguste obtusos et obsolete subrecurvos) vix sinuato, elytris fere simpliciter striatis (striis externis obsolete crenulatis), interstitiis minutissime punctulatis, antennis pedibusque longiusculis, clare rufo-ferrugineis.—Long corp. ln 4.

*Habitat* Teneriffam, a W. D. Crotch semel repertus.

The single example from which the above diagnosis has been drawn out was taken by Dr Crotch in Teneriffe (I believe, near Ycod el Alto), during the spring of 1862. In its fusco-piceous hue, very densely punctured head and prothorax, and most minutely punctulated interstices it agrees with the *H. picescens*, nevertheless it is very different in most other respects. It is well distinguished by its subopaque surface, by its (longitudinally) narrowish eyes, by the convexity of its prothorax (which is almost equally rounded at the sides, and has its extreme hinder angles obtuse and with a faint tendency to be sub-reflected), and by its elytra having their inner striae nearly simple—even the outer ones being but faintly crenulated.

## Fam. 76. CEdemeridæ.

### Genus 287 DITYLUS

Schmidt, in *Linn. Ent.* 1 87 (1846)

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\* Prof Heer, in the list which he prepared for M Hartung's volume, cites two species of *Helops* (namely, "*transversalis*, Br." and "*quadratus*, Br. ?") for Lanzarote, and one ("*quadratus*, Br. ?") for Fuerteventura. Being mere catalogue-insertions, it is scarcely necessary to notice them, or to conjecture what they were intended to refer to, but by "*quadratus* Br. ?" he probably meant the *H. æthiops* (which, however, has nothing in common with M. Brullé's *quadratus*) whilst his "*transversalis*, Br." may perhaps have been applied to one of the sexes of the *picescens*. But I must remark that M. Brullé has no *Helops* called '*transversalis*.' He has an *H. transversus*, but that insect comes nearer to the *carbunculus* than to anything else here enumerated, and is totally distinct from all the three species found in Lanzarote and Fuerteventura.

764 *Ditylus concolor*.

*D. elongato-cylindricus*, lætissime aurantiaco-testaceus, pube grossâ demissâ aurantiaco-testaceâ densissime tectus, prothorace cordato, inæquali (postice canaliculato, in disco utrinque longitudinaliter bi-impresso) — Long corp. lin 4-7

*Ditylus concolor*, *Brulle, in Webb et Beith (Col)* 70 pl 1 f 13 (1838)  
 — *fulvus, Woll, Ins. Mad* 523 (1854)

*Habitat* in Canaria, Teneriffa, Gomera et Palma, sub lapidibus necnon juxta radices plantarum (præsertim *Euphorbium*) latens

This elegant *Ditylus*, so remarkable for its pale, orange-yellow surface, which is densely clothed with decumbent pubescence of a similar colour, is (although decidedly scarce) widely spread over the Canarian archipelago, where in all probability it is universal. It was taken rather commonly by the Rev R T Lowe at Arguiguin, in the south of Grand Canary, on the 15th of April 1858, and I have myself obtained it from the vicinity of the Puerto Orotava, as well as below Taganana, in Teneriffe, and from the Barranco de Nogales in Palma. In Gomera it was found by Dr Crotch, and Teneriffan examples have likewise been communicated by the Barão do Castello de Paiva. It seems to be conspecific with the *Ditylus* which I described, in a foot-note of my 'Ins. Mad,' from the rocks of the Salvages (where it was captured, in 1851, by Mr Leacock, of Funchal), and is also *very* nearly allied to a species which occurs at the Cape de Verdes, and which, although with small and constant distinctions of its own, may *possibly* be but a geographical modification of it\*.

## Genus 288 ISCHNOMERA†

Stephens, *Ill. Brit. Ent.* v 53 (1832)

765 *Ischnomera melanura*

*Cantharis melanura*, *Linn., Syst. Nat.* ii 651 (1767)

*Ischnomera melanura*, *Steph., Ill. Brit. Ent.* v 54 (1832)

\* This *Ditylus* I described, in the 'Ann. of Nat. Hist.' in 1861, under the trivial name of *pallidus*, and I there stated that "it is not only of a much more pallid hue than the *concolor* (being of a pale testaceous, and entirely free from the beautiful orange tint which is always so conspicuous in that insect), but its pubescence is distinctly longer and coarser (particularly behind), its eyes are more prominent, its pronotum is somewhat less uneven, and the first joint of its antennæ is perceptibly thicker—a structure which is very apparent at the base."

† Although Stephens's genus *Ischnomera* is composed of several insects which have since been erected into separate genera, nevertheless, since he takes the *Cantharis melanura* as his *type*, and even expresses his conviction that the group requires in reality further subdivision, it seems most unfair to give the preference to *Nacerdes* of Schmidt, which was established (to receive that, and one other, insect) fourteen years afterwards. On this principle almost any of the old genera might be summarily disposed of by subsequent, and more accurate, analyzers.

*Ditylus rufus*, *Brulle, in Webb et Berth (Col)* 70 (1838)

*Nacerdes melanura*, *Schmidt, in Linn Ent* 1 29 (1846)

*Habitat*?

I have not myself observed this insect at the Canaries, and therefore I should not have admitted it into the present Catalogue had I not examined carefully the specimens of MM Webb and Berthelot, which are certainly conspecific with the *Ischnomera melanura* of central and southern Europe. M Brulle, of course, gives us no information as to the island in which they were found but it is not unlikely they may have been taken at Sta Cruz in Teneriffe, imported accidentally from more northern latitudes.

## Fam. 77. MELOIDÆ

Genus 289 MELOE

Linnæus, *Syst Nat* edit 1 (1735)

766 *Meloe tuccius*

*Meloe tuccia*, *Rossi, Fna Etrusc* 1 238 (1792)

— —, *Brandt et Erich, Mon Mel Nov Act Acad* vi 121 (1832)

— —, *Brulle, in Webb et Berth (Col)* 70 (1838)

— —, *Lucas, Col de l'Algerie*, 396 (1849)

— —, *Hartung, Geolog Verh altin Lanz und Fucit* 141, 142

*Habitat* in Lanzarote, Fuerteventura, Canaria, Teneriffe et Gomera, passim

The *M tuccius* of Mediterranean latitudes, so well distinguished by its usually immense size and deeply pitted (or variolose) surface, will almost certainly be found to be universal throughout the Canarian archipelago. At present, however, I have observed it only in Lanzarote, Grand Canary, and Teneriffe, but examples from Gomera have been communicated by the Barão do Castello de Paiva, and in Fuerteventura (as well as in Lanzarote) it was taken by M Hartung.

767 *Meloe rugosus*

*Meloe rugosus*, *Mshn, Ent Brit* 483 (1802)

— *rugulosa*, *Brulle, in Webb et Berth (Col)* 70 (1838)

— *rugosus*, *Woll, Ins Mad* 527 (1854)

— —, *Id, Cat Mad Col* 162 (1857)

*Habitat* in Teneriffe, Gomera et Hierro, hinc inde, minus frequens

The European *M rugosus*, which occurs also in the Madeiran Group, is found sparingly in these islands. I have taken it in Teneriffe, Gomera, and Hierro, from the first of which it has likewise been communicated by the Barão do Castello de Paiva.

768 *Meloe murinus*

*Meloe murina*, Brandt et Erich, *Mon Mel Nov Act Acad* xvi 127 (1832)

— —, Lucas, *Col de l'Algerie*, 398 (1849)

— flavicomus, Woll, *Ins Mad* 528 tab xiii f 1 (1854)

— —, Id, *Cat Mad Col* 162 (1857)

*Habitat* in Canaria, Teneriffa et Gomera, passim

This *Meloe*, which is also found in Mediterranean latitudes and which is abundant in the Madeiran Group, is, like the *rugosus*, sparingly distributed over the Canarian archipelago, where I suspect, however that it will be found to be universal. At present I have taken it only in Grand Canary and Teneriffe, but it was obtained (at Hiermigua) in Gomera by Dr Clotch. At first sight it closely resembles the last species, but is, *on the average*, a little smaller and with its limbs slenderer, and it is more or less clothed with a fine golden pubescence. Its head and prothorax (the former of which is more deeply channeled behind) are more finely punctured, and its eyes are a trifle less reniform—being rather broader (longitudinally), or more semi-circular.

769 *Meloe nudus*, n. sp.

*M* (vix subplumbeo-) *niger*, subopacus, alutaceo-coriaceus, capite prothoraceque parvisime sed argute punctatis, hoc parvo, basi profunde acutato-emarginato, inequali (se tenuiter canaliculato, ad basin ipsam profunde transversim impresso, in disco antico utrinque foveolato), oculis magnis, reniformibus—Long corp lin 7-8

*Habitat* in Fuerteventura, rarissimus

Readily known from the *murinus* by its freedom from pubescence, by its very much more sparingly punctured head and prothorax—the former of which is less deeply channeled behind, whilst the latter is less transverse (or more quadrate), as well as less uneven and rather more emarginated along its basal edge, and by its eyes being larger. It would appear to have more in common with the south-European *M majalis*, Linn, than with any other species with which I am acquainted, but is smaller, with its head and prothorax (the latter of which is less flattened, and less quadrate) more sparingly punctate, with its elytra differently sculptured, and with its eyes (longitudinally) broader. I have seen hitherto but three examples of it, all of which were taken in Fuerteventura—two by myself, and one by M Hartung.

770 *Meloe subcyaneus*, n. sp.

*M* subcyanescenti-niger, subnitidus, capite prothoraceque parce sed profunde punctatis, illo postice haud canaliculato, hoc subquadrato

postice paulo angustiore, subæquali, basi vix emarginato, oculis elongato-reniformibus, (longitudinaliter) angustis—Long corp  
ln 10

*Habitat* in intermediis Lanzarotæ, semel tantum repertus

The obscurely subcyaneous and slightly shining surface of this *Meloe*, combined with the *lightness* of its *under* sculpture (which on the head and prothorax is almost obsolete), and its narrow and rather elongate (-reniform) eyes, will sufficiently distinguish it from the whole of the preceding species. Its head and prothorax (the former of which is unchanneled except quite in front, whilst the latter is subquadrate and comparatively *even*) are sparingly but deeply punctured. The only example of it which I have seen was taken by myself in Lanzarote—I believe, on the hills immediately to the north of Los Valles de Sta Catalina, on the road to Haria. In general aspect it seems a good deal allied to a European species which I have in my collection under the name of *gallicus*, but is smaller and much less brightly cyaneous, its head and prothorax are less deeply punctured, and its eyes are longer and narrower.

## Fam. 78. MORDELLIDÆ

### Genus 290 MORDELLISTENA

Costa, *Faun. del Regn. Napol.*, *Mordell.* 16 (1849<sup>2</sup>)

#### 771 *Mordellistena pumila*

*Mordella pumila*, Gyll., *Fna. Suec.* 11 605 (1810)

— —, Steph., *Ill. Brit. Ent.* v 48 (1832)

*Habitat* in Canaria, Teneriffa, Gomera et Palma, ad flores haud infrequens

The European *M. pumila* is widely spread over the Canarian archipelago, where (although I did not happen to meet with it in Hierro) I believe it will be found to be universal in all the islands except Lanzarote and Fuerteventura (in which its place is supplied by the following species). Throughout the region of El Monte in Grand Canary I have taken it commonly, as also at Souzal, the Agua Garcia, and around the Puerto Orotava in Teneriffe, and in the Barranco da Agua of Palma—in the last two of which islands, as well as in Gomera, it was captured (during the spring of 1862) by Dr. Crotch.

#### 772 *Mordellistena sericata*, n. sp.

*M. pumila* similis et forsan ejus varietas insularis, vix minor, pube pallidior subaureo-cinereâ sericeâ hinc inde, sed præsertim per ely-

trorum suturam, (rarius omnino) vestita, quasi sericata — Long corp ln  $1\frac{2}{3}$ – $2\frac{1}{3}$

*Habitat* in Lanzarota et Fuerteventura, hinc inde ad flores

Although on the average a trifle smaller, the only real character, that I can detect, which separates this *Mordellistena* from the preceding one is the fact of its pubescence being of a paler (or somewhat golden-cinereous) hue—particularly down the sutural region of the elytra, which imparts to the surface, when viewed in one direction, a peculiarly silken appearance. It is possible, therefore, that it may be but an insular modification of the *pumila*, nevertheless, as it seems to obtain *universally* throughout Lanzarote and Fuerteventura, whilst the ordinary form of that insect is equally constant in the other islands of the Group, I am not satisfied that there is sufficient evidence for treating it as such. In rare instances the pale silken pubescence covers its entire surface, but it is more often concentrated merely down the suture. My examples are principally from the little island of Graciosa (off the extreme north of Lanzarote), and from the vicinity of Oliva in Fuerteventura.

### Genus 291 *ANASPIS*

Geoffroy, *Hist Abr des Ins* 315 (1762)

#### 773 *Anaspis Proteus*

*Anaspis Proteus*, Woll, *Ins Mad* 532 (1854)

— —, *Id*, *Cat Mad Col* 163 (1857)

*Habitat* insulas omnes Canarienses, ab orâ maritimâ usque ad 9000' s m ascendens

This most variable little *Anaspis*, which abounds throughout the Madeiran Group, is equally universal (and almost equally abundant) at the Canaries—in the whole seven islands of which I have myself captured it. It was found likewise by Mr Gray in Lanzarote, Teneriffe, Palma, and Hierro, by M Hartung in Lanzarote, by Dr Crotch in Teneriffe, Gomera, and Palma, and by the Barão do Castello de Parva and the late Rev W J Armitage in Teneriffe. It occurs independently of elevation, for in Teneriffe I have taken it from the sea-level to an altitude (on the Cumbre overlooking the Cañadas) of about 9000 feet, and it was met with by Dr Crotch in the same upland region.

Its variations of colour seem, as in Madeira, endless—some examples being almost black, whilst others are well nigh testaceous, but, on the average, the *dark* specimens prevail more at the Canaries

than in Madeira. Nevertheless the following observations, from my 'Ins Mad,' are nearly as applicable here as in the neighbouring Group. "So great are the changes of hue through which it passes, that at first sight it would seem to vary from a uniform testaceous into a deep black. Such, however, is not in reality the case (as a closer examination will prove), seeing that in the *palest* specimens an obscure portion along the suture, an ill-defined cloud at the base, and a sublateral dash towards either side (representing the transverse medial band) are usually more or less present on the elytra, and there are often the rudiments of a patch on the prothoracic disc, whilst even in those extreme varieties where these darker portions are so increased in size as to occupy nearly the entire surface there are generally faint indications of four subrufescent elytral blotches, which at once enable us to identify them with the rest."

## Fam. 79. ANTHICIDÆ.

### Genus 292 FORMICOMUS

(Motschulsky) La Ferté, *Mon des Anth* 70 (1848)

#### 774 *Formicomus cæruleipennis*

*Anthicus cæruleipennis* (Dufour), *Dcf, Cat* 249 (1836)

*Formicomus cæruleipennis*, *La Ferté, Mon des Anth* 73 (1848)

*Anthicus cæruleipennis*, *Lucas, Col de l'Algerie*, 369 (1849)

*Habitat* Canariam Grandem, ad Arguanguin d 14 Apr 1858  
duo exemplaria depicendi

This elegant insect, so remarkable for its clear rufo-ferruginous prothorax and limbs, black head, viridi-cyaneous elytra, and shining, pilose surface, appears to be of the greatest rarity in these islands—the only two examples which I have seen having been captured by myself, on the 14th of April 1858, by brushing the short grass at the edges of one of the freshwater pools (close to the sea) at Arguanguin, in the south of Grand Canary. It is recorded by La Ferté from Algeria and the south of Spain, and indeed I possess a specimen which was taken by the Rev Hamlet Clark at Malaga.

### Genus 293 ANTHICUS

Paykull, *Fna Suec* 1 253 (1798)

#### 775 *Anthicus floralis*

*Anthicus floralis*, *Fab, Syst Eleu* 1 29 (1801)

—, *Schmidt, Stett Ent Zeit* m 131 (1842)

*Anthicus floralis*, *La Ferté, Mon des Anth* 150 (1848)

— —, *Woll, Cat Mad Col* 164 (1857)

*Habitat* in Lanzarote, Fuerteventura, Teneriffa et Gomera, sub quicquibus et in cultis, hinc inde frequens

This common European insect, which has been naturalized in the most distant parts of the world and which is abundant around Funchal in Madeira, will almost certainly be found to be universal in these islands. Hitherto, however, I have taken it only in Lanzarote, Fuerteventura, and Teneriffe, but it was found by Dr Crotch in Gomera. In Lanzarote it was captured likewise by Mr Gray

### 776 *Anthicus hispidus*

*A. niger*, nitidus, paice cinereo-pilosus pilisque nigris longissimis erectis obsitus, ubique profunde sed paice punctatus, elytris pone basin fasciâ transversâ dentatâ testaceâ ornatis, antennis, fimbriis tarsisque piceo-testaceis — Long corp lin  $1\frac{1}{2}$

*Notoxus hispidus*, *Rossi, Mant* 1 46 (1792)

*Anthicus hispidus*, *La Ferte, Mon des Anth* 209 (1848)

— —, *Woll, Ins Mad* 535 (1854)

— —, *Id, Cat Mad Col* 166 (1857)

*Habitat* Lanzarotam borealem, semel tantum captus

Of the *A. hispidus* of Mediterranean latitudes, and which abounds at rather low elevations in Madeira, I have taken but a single example, hitherto, in these islands—namely, near Hania, in the north of Lanzarote. We may, however, expect it to occur more generally. It may be known by its black surface having a transverse, dentate, testaceous fascia behind the base of the elytra, and being deeply but somewhat sparingly punctured, as well as beset (in addition to its decumbent cinereous under-pile) with exceedingly long and erect darker hairs. In the specimen before me the prothorax is concolorous with the rest of the surface, but this is probably accidental, as that portion of the body is nearly always more or less obscurely rufescent behind.

### 777 *Anthicus crinitus*

*A. gracilis*, piceo-niger, nitidus, paice sed grosse cinereo-pilosus, capite prothoraceque paucissime et minute punctulatis, illo subrotundato-quadato, hoc angusto, lacte rufo-ferrugineo, elytris profundius punctatis, fasciâ magnâ transversâ obliquâ mox pone basin et maculâ parvâ communî posticâ centrali (rarius obsoletâ) rufo-testaceâ ornatis, antennis pedibusque testaceis, femoribus apicem versus plus minus picescentibus — Long corp lin  $1\frac{1}{3}$ — $1\frac{1}{2}$

*Anthicus crinitus*, *La Ferte, Mon des Anth* 204 (1848)

— —, *Woll, Cat Mad Col* 165 (1857)

*Habitat* in Canaria, Teneriffa et Gomera, parum rarus

This *Anthicus* is slenderer and more rufescent than the *hispidus*,

its head and prothorax (the latter of which is rufo-ferruginous and less widened anteriorly) are much less coarsely and less closely punctured, its elytra have their basal fascia larger and differently shaped, and increased by an additional patch (rarely obsolete), common to them both, on the suture behind, and its surface is free from the elongate, erect, darker hairs which are so conspicuous in that insect. As at Madeira, it appears to be rare in these islands, though widely distributed over the archipelago. I have taken it sparingly at San Mateo in Grand Canary, and near the Puerto Orotava in Teneriffe, and it was found by Dr Crotch in Gomera. It is recorded by La Ferte from Egypt and Senegal.

### 778 *Anthicus humilis*.

*A. colore facieque generali. A. cinnato primâ facie fere similis, sed pube breviori minutiori ac magis demissâ minoratus, capite prothoraceque sensim minoribus, minus nitidis ac multo densius punctatis, illo ovali (ergo postice rotundatiore, angulis posticis omnino rotundatis obsoletis) rufescentiore oculis minoribus, hâc postice magis constricto, elytris subconvexioribus (ad latera vix magis rotundatis) subleviusque punctatis, pone basin minus evidenter impressis, plagâ posticâ communi submajori necnon in medio per suturam evidentius bipartita (1 e in maculas duas divisa).—Long corp lin  $1\frac{1}{4}$ — $1\frac{1}{2}$*

*Anthicus humilis, Germ., Fna Ins. Eur.* 10 6 (1817)

—— *constrictus (Rudd), Steph., Man.* 342 (1839)

—— *humilis, La Ferte, Mon. des Anth.* 125 (1848)

*Habitat* Lanzarotam, rarissimus

The *A. humilis* of central and southern Europe may easily be known from the *cinnatus* (to which in its general colouring the brighter examples of it approach very closely) by having its pubescence shorter, finer, and completely decumbent, both its head and prothorax smaller, rather less shining, and much more densely punctured—the former being likewise more *oval* (or rounded behind the eyes—which are themselves less developed) and more rufescent, whilst the latter is more *constricted posteriorly*, and by its elytra being just perceptibly convexer and more rounded at the sides, less evidently impressed behind the base, rather more lightly punctured, and with their post-medial patch (or abbreviated fascia) both larger and more decidedly *interrupted* (or divided into two spots) along the suture. I have seen hitherto but six examples of it, all of which were captured (five of them by myself, and one by Mr Gray) in Lanzarote—I believe, at the Salinas, in the extreme north of that island.

### 779 *Anthicus opaculus*, n. sp.

*A. subopacus, pube minutâ fulvo-cinereâ demissâ vestitus, capite pro-*

thoraceque rufo-ferrugineis, densissime et (præsertim illo) parum profunde punctatis, illo subquadrato convexo, hœc antice lato, elytris subconvexis, paulo subtilius punctatis, piceo-nigris, antice necnon in maculâ magnâ communi posticâ plus minus suffusâ (et interdum etiam per suturam) rufo-ferrugineis, antennis rufo-ferrugineis, pedibus pallide rufo-testaceis — Long corp lin  $1\frac{1}{2}$

*Habitat* in aridis arenosis Lanzarotæ, Fuerteventura et Canariæ, hinc inde (præsertim in locis inferioribus) vulgaris

This *Anthicus* seems to be rather common in dry sandy spots, principally (though by no means always) of a low elevation, in Lanzarote and Fuerteventura (in the latter of which it was taken likewise by Mr Gray), and less so in Grand Canary. It may easily be known by its rufo-ferruginous hue and rather opaque surface, which is clothed with a very minute and entirely decumbent fulvo-cinereous pubescence, by its head and prothorax (the former of which is squarish and convex, whilst the latter is much widened anteriorly) being very densely and somewhat deeply punctured, by its elytra (which are a little convex, and not at all impressed in front) being piceous-black but broadly rufo-ferruginous at their base, and with the postmedial patch (of the same colour) which obtains equally in the last two species larger and more suffused, and frequently united along the suture to the basal portion, and by its legs being altogether pale

#### 780 *Anthicus notoxoides*, n. sp.

*A* præcedenti valde similis sed paulo major, lætius coloratus, minus opacus et pube sensim pallidior (magis argenteâ) longiorique vestitus, punctis ubique submajoribus, oculis multo magis prominentibus, prothorace antice latiore, antennarumque articulis intermediis vix longioribus — Long corp lin  $1\frac{2}{3}$

*Habitat* in Lanzarota et Fuerteventura, rarissimus

Of this *Anthicus* I have but two examples (one of which is immature) to judge from, nevertheless it is certainly distinct from the last species, which in general hue and markings it much resembles — being larger, more brightly coloured, and less opaque, with its pubescence a trifle longer, paler (or more silvery), and less depressed, and its punctation a little coarser. Its eyes are very much more prominent, its prothorax is still broader in front, and its antennæ have their intermediate joints just perceptibly more elongated. One of my specimens I captured on the hills above Haria, in the north of Lanzarote, and the other in Fuerteventura\*

\* I had at first imagined it possible that the immature example (from Fuerteventura) above referred to might be a pale and ill-developed female of the European (and Madeiran) *A. instabilis*, but having identified it satisfactorily with

781 *Anthicus dimidiatus*, n sp

*A* gracilis, parum nitidus, piceo-niger, pube minutâ fulvo-cinereâ demissâ vestitus, ubique minutissime et levissime punctulatus, capite parvo, ovali (pone oculos rotundato), prothorace postice constricto, elytris angustis, subparallelis, ad (aut potius mox pone) basin fasciâ maximâ testaceâ obliquâ (fere ad medium ductâ) ornatis, antennis pedibusque longiusculis, graciliusculis, pallido-testaceis, femoribus plus minus picescentibus—Long corp lin 1-1½

*Habitat* in salinis Lanzarotæ et Canariæ, sed parum rarus, necnon etiam in Gomera, infra oppidum Heimgua, cepit W D Crotch

The narrow outline and dark surface of this little *Anthicus*, which has an immense fascia at the base of its subparallel elytra (occupying almost their anterior half), together with its antennæ, tibiæ, and tarsi, testaceous, and the punctules of its entire surface *most* minute and lightly impressed, will sufficiently distinguish it. In its small, *oval* head, basally-constricted prothorax, and rather slender and elongated limbs it agrees with the *A humilis*, nevertheless all its other characters (of colour, markings, sculpture, and outline) are entirely different from those of that insect, whilst its total freedom from a postmedial elytral patch will tend rather to bring it into juxtaposition with the *lapidosus*

The *A dimidiatus* I have myself observed only in salt places in Lanzarote and Grand Canary—in the former of which I met with it both at the Salinas in the extreme north of the island, and along the edges of the salt lake of “Januvio” adjoining the south-western coast, whilst, in the latter, I took a few examples, on the 12th of April 1858, in a precisely similar spot, at Juan Grande. Five specimens of it were, however, captured by Dr Crotch, during the spring of 1862, “below Heimgua” in Gomera

782 *Anthicus lapidosus*, n sp

*A* subnitidus, niger, pube grossâ argenteo-cinereâ sat dense vestitus, ubique profunde et (præsertim in elytris) dense punctatus, capite quadrato, prothorace antice minus dilatato, postice vix constricto, elytris ad humeros subrectis, pone basin fasciâ parvâ valde obliquâ indistinctâ (interdum ægre observandâ suffusâ) subtestaceâ ornatis,

the other, and perfect one (from Lanzarote), I now perceive that (even assuming them both to be females) they could not be identical with that species, for (not to mention the colour, which is paler and quite different) its punctuation is altogether a little coarser, its head is longer behind the eyes, its prothorax is wider in front, its pubescence is not quite so minute, its antennæ are relatively somewhat slenderer, with their intermediate joints less abbreviated, and its legs are entirely pale. I need scarcely add that if either of these two examples be *males*, it is still further separated from the *instabilis* by the simple posterior tibiæ of that sex

antennis pedibusque infuscato-testaceis, illarum articulo ultimo horumque femoribus plus minus picescentibus — Long corp lin 1-1½

*Habitat* Teneriffam, inter lapillos per marginem paludis cujusdam parvæ in "Barranco Santo" prope Sanctam Crucem lectus

Readily known by its small size, dark hue, thickly and (especially on the elytra) deeply punctured surface (which is rather densely clothed with a robust, decumbent, silvery pile), by its square head, and by its elytra (which are rectangular at the shoulders) being each of them ornamented immediately behind the base with an exceedingly oblique and very obscure (occasionally but just traceable) paler fascia. Its limbs are brownish-testaceous, with the apical joint of the antennæ, and the femora, more or less picescent. The only spot in which I have observed it is at the extreme head of the Barranco Santo (close to S' Cruz) in Teneriffe—where, in June 1858, I captured it in profusion amongst wet shingle at the edges of a small stagnant pool, in company with the *Perileptus nigrivittatus* and several minute members of the *Staphylinidæ*.

### 783 *Anthicus angustatus*

*A* præcedenti primâ facie similis, sed opacior, puncturâ multo leviore, capite prothoraceque (sensim longiore) rufescentioribus (se rufo-piceis), elytris multo magis ovalibus (ad humeros rotundatis, nec rectis), nigris, immaculatis, antennis pedibusque omnino piceo-testaceis — Long corp lin 1½

*Anthicus angustatus*, *Curt, Brit Ent* fo 714

— —, *Steph, Mun* 342 (1839)

*Habitat* Fuerteventuram, a Dom Gray semel tantum repertus

Of this little *Anthicus* I have seen but a single Canarian individual, which was taken by Mr Gray in Fuerteventura, and which does not appear to differ appreciably (so far as I can detect) from the British *A angustatus*. In its small size, general colouring, robust, silvery pubescence, and squarish head it has somewhat the *primâ facie* aspect of the *lapidosus*, nevertheless, when viewed more closely, it will be seen to be totally distinct. Thus, it is more opaque and with its punctation much lighter, its head and prothorax (the latter of which is a little longer) are rufo-piceous instead of black, its elytra are much more oval (or considerably rounder at the shoulders), black, and immaculate, and its limbs are uniformly piceo-testaceous.

### 784 *Anthicus guttifer*, n. sp

*A* subnitidus, niger, pube fulvo-cinereâ demissâ parce vestitus,

ubique dense punctatus, capite subquadrato, oculis minutis, prothorace breviusculo, basi marginato, elytris ad humeros maculâ obliquâ et in disco postico alterâ submajore transversâ, testaceis, utrinque ornatis, antennis pedibusque fusco-testaceis, femoribus picescentioribus

*Variat* (immatuus) capite prothoraceque rufescentioribus — Long corp lin 1-1½

*Obs* — *A. tristis* Schmidtii valde affinis et forsan ejus varietas geographica. Differt solum oculis etiam subminoribus, prothorace paulo minore, brevior, elytris sublatioribus, puncturâ omnino sensim fortiore et pube vix minus fulvescente

*Habitat* insulas omnes Canarienses, præsertim in inferioribus degens

It is with some hesitation that I regard this *Anthicus* as more than a geographical modification of the *A. tristis* of Mediterranean latitudes — with which, in its dark hue, squarish head, and the two more or less brightly testaceous spots (humeral and postmedial) with which each of its elytra is ornamented, it agrees, nevertheless, since the few minute differences which it presents are partly structural ones, I feel doubtful whether it would be safe to unite it actually with that species. Thus, when closely inspected, it will be seen that its eyes are invariably even more minute still than those of the *tristis*, its prothorax is altogether a little smaller and shorter, its elytra are a trifle wider, its punctation is appreciably coarser, its surface is rather less pubescent, and the pubescence itself is (if anything) less fulvous. It is a universal insect, principally at low elevations, throughout the Group — I having myself taken it in all the islands except Gomera (whence, however, there are seven examples now before me which were captured by Dr Crotch). In Lanzarote it was met with likewise by Mr Gray

#### 785 *Anthicus canariensis*, n. sp.

*A. subnitidus*, pube cinereâ demissâ tenui vestitus, ubique levissime et minutissime punctulatus (nisi oculo armato quasi impunctatus), capite prothoraceque vel nigris vel piceis (interdum submetallicotinctis), illo subquadrato-rotundato, hoc brevi, postice (rarius omnino) pallidiore ac profunde subconstricto-impresso, elytris testaceis, per suturam plus minus infuscatis (rarius concoloribus), antennis ad basin subgracilibus testaceis, versus apicem obscurioribus sensim crassioribus (articulo ultimo subincrassato), pedibus testaceis, femoribus picescentioribus — Long corp lin 1-1½

*Habitat* insulas Canarienses, in Hierro solâ adhuc haud detectus

In my notice of the *Attalus anthuoides* [vide p. 224] I called attention to the curious analogy, both of aspect and habits, which exists

between the present insect and that one, despite their being so widely removed from each other in affinity. Indeed, as there stated, when found in company (as is frequently the case), it is not always easy at first sight to define between them—as I have often experienced when collecting them (in Lanzarote) from beneath the refuse lying upon the ground around the base of corn-stacks (a *habitat* which is quite normal for an *Anthicus*, though a very anomalous one for a member of the *Malachinidæ*). Its more or less lurid-testaceous hue (the head, the anterior portion of the prothorax, and the elytral suture being alone, usually, more or less blackened) will at once separate it from the other *Anthici* here enumerated, nevertheless it is extremely variable in colour, inasmuch as the *entire* prothorax and elytra are sometimes pale, whilst at others, on the contrary, the whole surface is a good deal infuscated. Its antennæ are rather slenderer at the base, and more incrassated towards the apex, than is the case with the *Anthici* generally (the terminal joint itself being often appreciably enlarged), its elytra are of a softer, or less consistent, texture, and its punctuation is so light and minute as to be almost obsolete.

The *A. canariensis* is doubtless universal throughout the Group indeed I have myself captured it in all the islands except Gomera and Hierro, in the former of which it was taken by Dr Crotch. In Lanzarote, Fuerteventura, and Teneriffe it was found likewise by Mr Gray, and it has been communicated from the last by the Barão do Castello de Paiva. I even met with it on the little island of Graciosa, off the extreme north of Lanzarote.

#### 786 *Anthicus scydmænoides*, n. sp.

*A. fusco-piceus*, subnitidus, pube subcinerea demissâ tenui vestitus, capite magno, subrotundato, convexo, prothorace brevi, postice valde angustato et subconstricto-impresso, clytris ellipticis postice acutiusculis, conspiciue punctatis, concoloribus, antennis pedibusque gracilibus, illis fusco-, his pallido-testaceis.—Long corp. lin.  $\frac{1}{4}$

*Habitat* Teneriffam, a W. D. Crotch semel repositus

The *elliptical* (or somewhat obovate, posteriorly acute) elytra and brownish-piceous hue of this excessively minute *Anthicus* give it so much the *primâ facie* appearance of a *Scydmænus*, that, before an accurate examination, I had inadvertently referred it to that group. Nevertheless the outline of its head and prothorax, as well as the structure of its antennæ, palpi, and feet, of course immediately remove it, on a closer inspection, from the *Scydmænidæ*. Its head and

prothorax (the former of which is large and round, whilst the latter is considerably abbreviated and much narrowed behind) are almost free from sculpture, but its elytra are rather distinctly punctured. The only specimen which I have seen is due to the researches of Dr Crotch in Teneriffe, during the spring of 1862.

### Genus 294 **OCHTHENOMUS**

(Dejean) Schmidt, *Stett. Ent. Zeit.* in 196 (1842)

#### 787 **Ochthenomus senilis**, n. sp.

*O. angustus*, fusco-piceus, opacus, pilis brevissimis cinereis argute irroratus et ubique dense punctulatus, capite elongato-subquadrato, inter oculos parvos prominentes depresso, prothorace parvo, tenui, basi magis testaceo, elytris subparallelis, mox pone basin fasciâ magnâ transversâ necnon ad apicem ipsum maculâ distinctiore hastatâ, testaceis, ornatis, antennis elongatis, apicem versus incrassatis, ferrugineis, pedibus gracilibus, testaceis.—Long corp. lin. vix  $1\frac{1}{2}$ .

*Habitat* Palmam, ad rupes excelsas aquosas semel repertus.

A single example of this beautiful *Ochthenomus* was captured by myself, during June 1858, at a high elevation in the island of Palma—at the base of some damp, trickling rocks above the Pinal of the Banda, close to the edge of the great Caldeira.

### Genus 295 **XYLOPHILUS**

(Bonelli) Latr., *Fam. Nat.* 383 (1825)

§ I *Corpus gracile, subcylindricum. Antennæ in maribus longissimæ, intus serratæ, art. 2<sup>da</sup> (in utroque sexu) brev. Oculi magni, in maribus maximi supra fere contigui. Pedes longiusculi.* (Eugenes, Westw.)

#### 788 **Xylophilus oculatissimus**, n. sp.

*X. testaceus*, dense et (præsertim in elytris) profunde punctatus, pube grossâ subdemissâ fulvescente dense vestitus, capite transverso-rotundato, paulo fuscescentiore, prothorace parvo, subconico-quadrato, basi transversim impresso, angulis posticis subrectis, elytris parallelis, in medio fasciâ indistinctâ suffusâ (antice per suturam et ad latera per marginem ductâ) fuscescente nebulosis, basi conjunctim subemarginatis.—Long corp. lin.  $1\frac{1}{2}$ .

*Habitat* Palmam, cum *Ochthenomo senili* deprehensus.

This beautiful *Xylophilus*, the elongated antennæ of which (with their abbreviated second joint) and enlarged subconfluent eyes, in the male sex, would refer it to the subgenus *Eugenes*, is remarkable, *inter alia*, for its testaceous surface—which has merely a suffused, indistinct, cloudy fascia across the central region of its elytra (and more or less produced along the lateral margins and the anterior portion

of the suture) slightly darkened Its head, however, would appear to be sometimes a little infuscated I have seen hitherto but three examples of it, which were taken by myself at a high elevation in the island of Palma—in the same locality as (and indeed in company with) the *Ochthenomus senilis*, described above

§ II *Corpus ovatum* *Antennae (in utroque sexu) breviores, haud serratae, articulis intermediis brevibus, inter se subaequalibus* *Oculi minores, in utroque sexu distantes* *Pedes breviores* (Phytobœnus, Sahlb.)

### 789 *Xylophilus pallescens*

X testaceus, dense sed minutissime punctulatus (capite fere impunctato), pube subtilissimâ brevissimâ valde demissâ cinereo-fulvescente densissime vestitus (quasi sericatus), capite subtriangulâ, prothorace transverso-quadiato, antice vix latiore, ad latera versus angulos posticos argute obtusiusculos oblique subtruncato, basi intra angulos minute foveolato, elytris ovalibus, subconvexis, concoloribus, basi conjunctim trisinuatis—Long corp lin vix 1

*Xylophilus pallescens*, Woll, *Ins Mad* 538 tab xiii f 3 (1854)

— —, *Id*, *Cat Mad Col* 167 (1857)

*Habitat* Teneriffam, in collibus mox supra Sanctam Crucem lectus

A single example of this insect, which occurs, not uncommonly, beneath vegetable refuse around Funchal in Madeira, was taken by myself on the ascent of the mountains immediately behind Sta Cruz of Teneriffe—in the direction of El Campo and the Las Mercedes range

## Fam. 80 SCYDMÆNIDÆ.

### Genus 296 SCYDMÆNUS

Latreille, *Gen Crust et Ins* 1 232 (1806)

### 790 *Scydmaenus tarsatus*

S piceo-niger, nitidissimus, fere impunctatus, parce sed grosse fulvescenti-cinereo-pubescent, prothorace ad basin foveolis quatuor punctiformibus notato, elytris ovalibus, apice pygidio brevioribus, basi lineolis duabus impressis, antennis pedibusque crassis, pallide rufo-ferrugineis, tarsis anticis dilatatis—Long corp lin  $1\frac{1}{8}$

*Scydmaenus tarsatus*, Kunze, *Mon Scyd* 11 f 3 (1823)

— —, Denny, *Mon Pselaph et Scyd* 57 (1825)

— —, Steph, *Ill Brit Ent* v 80 (1832)

*Habitat* Teneriffam, a W D Crotch nuper repertus

Six examples of the European *S tarsatus* were taken by Dr Crotch in Teneriffe, during the spring of 1862 They seem to accord precisely with the ordinary type—the species being well distinguished

by its bright and coarsely pubescent but almost impunctate surface, by the four rounded, punctiform foveæ at the base of its prothorax, and by the robustness of its antennæ and legs, the latter of which have then front tarsi perceptibly dilated

## Fam. 81. PSELAPHIDÆ

### Genus 297 EUPLECTUS

(Kirby) Leach, *Zool Miscell* (1817)

#### 791 *Euplectus Karstenni*

*E* rufo-testaceus, capite dense punctulato, antice transversim impresso et utrinque sulcato, prothorace in disco foveolâ impresso, basi profundius trifoveolato, elytris depressiusculis — Long corp lin vix  $\frac{3}{4}$

*Pselaphus Karstenni*, *Reichenb*, *Mon Pselaph* 71 tab n f 21 (1816)

*Euplectus Karstenni*, *Denny*, *Mon Pselaph et Scyd* 12 (1825)

— —, *Aube*, *Ann de la Soc Ent de France*, 146 (1844)

*Habitat* Teneriffam et Palmam, sub cortice laxo putrido in sylvaticis intermediis degens

The rufo-testaceous hue and distinctly punctured head of this *Euplectus*, combined with its rather depressed elytra and other details, seem to refer it to the European *E Karstenni*. It is rare at the Canaries, or at any rate local, and confined apparently to the sylvan districts of intermediate elevations. Under such circumstances I have taken it sparingly (from beneath the loose, rotting bark of trees) at Las Mercedes in Teneriffe, and more abundantly high up in the Barranco da Agua of Palma

#### 792 *Euplectus monticola*, n sp

*E* præcedenti similis, sed paulo major, foveis in capite prothoraceque levius impressis, oculis sensim majoribus, antennis pedibusque sublongioribus, illarum clavâ longiore, laxiore (magis perfoliata), articulis penultimo et antepenultimo distincte majoribus — Long corp lin 1

*Habitat* in montibus valde excelsis Teneriffæ, usque ad 9000' s m ascendens

Although in general aspect and hue this *Euplectus* agrees with the *Karstenni*, nevertheless it is certainly distinct from it, ascending moreover (apparently) to a much higher elevation,—the only two examples which I have seen having been captured by myself on the lofty Cumbre of Teneriffe, overlooking the Cañadas, about 9000 feet above the sea. It differs from the *Karstenni* in being a little larger, with

the foveæ of its head and prothorax more lightly impressed, in its eyes being less minute, and in its limbs being perceptibly longer, with the antennal club more elongated and *perfoliate* (the penultimate and antepenultimate joints being more loosely connected, and very appreciably larger)

### 793 *Euplectus sanguineus*

*E. piccus* vel *picco-castaneus*, capito utrinque punctulato, antice transversim impresso et utrinque profunde sulcato, prothorace in disco foveolâ impresso, basi profundius trifoveolato, clytris convexiusculis, postice sensim latoribus, antennis pedibusque picco-testaceis — Long corp.  $ln \frac{3}{4}$

*Euplectus sanguineus*, Denny, *Mon. Pselaph. et Scyd.* 10 (1825)

—— —, Heer, *Fna. Col. Helv.* 362 (1841)

—— —, Aubé, *Ann. de la Soc. Ent. de France*, 146 (1844)

*Habitat* Teneriffam, a W. D. Crotch semel captus

A single specimen of this insect was taken by Dr. Crotch in Teneriffe, during the spring of 1862. I can detect no character to separate it from the European *E. sanguineus*—a species which may be known by its *piceous*, or dark-chestnut, hue (the limbs, however, being paler or more testaceous), by its head being punctured on either side (though less densely and less coarsely so than in the *Karstenii*), and by its elytra being rather convex, and rounded laterally (or gradually somewhat widened behind)

### Genus 298 *ENOPTOSTOMUS* (nov. gen.)

Schaum\* (in hoc opusculo citatus)

“*Antennæ* approximate, tuberculi frontalis lateribus insertæ, maior quatuor, feminae duobus articulis ultimis incrassatis, ultimo majore. *Palpi maxillares* 4-articulati (?), articulo secundo valde arcuato, apice parum incrassato, tertio utrinque valde dilatato, semilunari, quarto in conum transversum dilatato (ultimis duobus appendice laterali setiformi instructis). *Tarsi* unguiculis duobus æqualibus

“This new genus is allied to *Otenistes* and *Centrotoma*, especially to the former, the maxillary palpi have lateral setiform appendages as in those genera, but only on the last two joints

\* The little Pselaphid which forms the type of the above genus I consigned recently for description to Dr. Schaum, feeling assured that his long and close attention to the *Pselaphidae* would enable him to point out its distinctive peculiarities with greater precision than I should myself be in a position to do. I would wish therefore to state that the generic and specific diagnoses given above have been communicated by him, for insertion in this Catalogue, and that I consequently cite them *verbatim*, without any additional observations of my own (beyond those relating to the *habitat*).

"*Body* covered with squamiform hairs. *Head* not broader than the prothorax and a little longer than broad, rounded behind and narrowed in front (the front being produced into a short process), longitudinally divided by a feeble channel, the forehead rather flat, and impressed with two foveæ. *Eyes* very prominent. *Antennæ* implanted at the sides of the frontal process, and 11-jointed, the first two joints thicker than the following one (the 1st being subcylindrical, and the 2nd somewhat rounded), the 3rd to the 7th equal and subglobular, the last four different according to the sex, —in the *male* all of them being thickened (the 8th considerably larger than the 7th, the 9th also larger than the 7th but smaller than the 8th, the 10th a little larger than the 8th, the 11th much incrassated, twice as long as the 10th, and rounded, with a somewhat oblique apex), whilst in the *female* the last two joints only are thickened (the 8th being even a trifle smaller than the 7th and 9th, which are of equal size), but a little smaller than in the male. *Mandibular palpi* 4(?)-jointed,—the basal joint (if existing) minute and not visible without dissection, the second strongly bent (being almost elbowed behind the middle) and slightly thickened at the apex, the third greatly dilated (more so on its inner than its outer side) and almost semilunar (being rounded at the base and nearly straight along its anterior edge—the outer horn being produced into a long setiform appendage, whilst on the inner horn the last joint is implanted), and the fourth of the same size as the preceding one but forming a transverse cone, and equally furnished with a lateral setiform appendage. *Prothorax* not longer than broad, with a round and large fovea in the middle behind, and a deep longitudinal impression on either side. *Elytra* longer than the prothorax, rounded at the shoulders and dilated towards their apex, transversely impressed along their hinder edge, and more thickly covered in this impression (or groove) with squamiform hairs, with an entire stria (on each) alongside the suture, and another in the middle which is more deeply impressed at the base. *Abdomen* with four segments uncovered, the first three have a thick margin, and the second is densely clothed with squamiform hairs at its base. *Legs* slender, *tibiae* a little bent, *tarsi* narrow and short (the four hinder ones being four times shorter than the tibiae), and all of them terminated by two equal and minute claws."

794 "*Enoptostomus Wollastoni*, n. sp.

"*E.* rufo-testaceus, nitidus, subdepressus—Long corp. lin.  $\frac{2}{3}$ ."

*Habitat* in Teneriffa et Gomeia, sub lapidibus rarissimus

Apparently both rare and local. The only examples (about twenty in number) which I have seen (except one which was found by Dr Crotch in Gomeia) were captured by myself close to Sta Cruz, in Teneriffa—from beneath small stones, under some fig-trees, at a low elevation in (and on the southern side of) the Barranco do Passo Alto

## Fam. 82. STAPHYLINIDÆ.

(Subfam I ALEOCHARIDES)

Genus 299 **FALAGRIA.**(Leach) Mannerheim, *Brachél* 86 (1831)795. *Falagria obscura.**Aleochara obscura*, *Gray*, *Col Micropt* 74 (1802)*Falagria obscura*, *Mann*, *Brachél* 87 (1831)———, *Woll*, *Ins Mad* 541 (1854)———, *Id*, *Cat Mad Col* 169 (1857)*Habitat* insulas Canarienses, in Lanzarota et Hierro hactenus haud detecta

This common European insect (which abounds in Madeira and Porto Santo) is widely spread over the Canarian Group, where it is doubtless universal—though hitherto it does not happen to have been observed in either Lanzarote or Hierro. But in Fuerteventura, Grand Canary, Teneriffe, and Palma I have myself taken it, and in Gomera it was found by Dr Crotch. In Palma it was likewise met with by Mr Gray. It occurs principally at rather low elevations, but does not appear to be anywhere abundant.

Genus 300 **ECHIDNOGLOSSA** (nov. gen.).

*Corpus* angustum, *capite* rotundato, per collum angustum prothoraci connexo, *elytris* brevissimis, *abdomine* basi valde constricto. *Antennæ* articulis 1<sup>mo</sup>, 2<sup>do</sup> et 3<sup>ro</sup> reliquis longioribus. *Labrum* transversum, antice rotundatum subintegrum (obsolete trilobatum). *Mandibulæ* elongatæ, basi subrectæ, apice incurvæ acutissime, intus pone apicem usque ad basin membranâ angustissimâ tenuissimâ (ægerrime observandâ) minute ciliatâ auctæ necnon in unâ denticulo minutissimo pone medium armatæ. *Maxillæ* lobo *externo* basi apiceque membranaceo, apice pubescente, *interno* vix brevior, intus membranaceo spinulisque elongatis omnino ciliato. *Palpi* longissimi, *maxillares* articulis 2<sup>do</sup> et 3<sup>ro</sup> elongatis clavatis (hoc crassiore), 4<sup>to</sup> tenui aciculari, *labiales* 3-articulati, articulis inter se longitudine subæqualibus, latitudine decrescentibus (3<sup>ro</sup> tenui cylindrico). *Mentum* transversum, apice late sed leviter emarginatum. *Ligula* antice in medio longissima, angustissima, parallela, membranacea, summo apice minutissime bifida, *paraglossis* nullis. *Tarsis* omnibus certe 5-articulatis, *posticis* articulis quatuor basalibus gradatim paulo decrescentibus.

Ab *ἐχίδνα*, vipera, et *γλῶσσα*, lingua

In its round but excessively pedunculated head (which is joined to the thorax by an extremely narrow neck), as well as in its peculiar outline, greatly abbreviated, subconvex elytra, and basally-constricted

abdomen, the unique insect from which the above structural characters have been drawn has much the appearance of a large *Autaha* or *Falagria* (especially the former), nevertheless *all* its tarsi are most unquestionably 5-articulate, and it has no visible paraglossæ. In both of these latter respects, and in the narrow, parallel, greatly produced anterior portion of its ligula, it agrees with *Ocalea*, but the majority of its external features are so completely on the *Autaha*-type that I cannot but think that it would be unnatural to remove it far from that group. With the exception of its extremely elongated and straightened ligula, its oral organs are nearly similar to those of *Homalota*, but its front feet are (like the remainder) pentamerous, and in its general *facies* it is totally different from the members of that genus.

796 *Echidnoglossa constricta*, n sp

*E* rufo-ferruginea, subnitida, alutacea (vix punctulata), parce pubescens, capite paulo obscuriore, prothorace angusto, ante medium angulatum sublatis, canaliculato (canaliculâ in disco obsoletâ, sed postice in foveam latiore mergente), elytris brevissimis, subconvexis, ad latera vix obscurioribus, abdomine postice obscuriore, antennis pedibusque infuscato-testaceis, illis versus apicem nigrescentibus — Long corp. lin  $1\frac{3}{4}$

*Habitat* Teneriffam, prope oppidulum Guia a W. D. Crotch reperta.

Apparently extremely rare, the only specimen which I have seen having been captured by Dr. Crotch (during the spring of 1862) near the little town of Guia (opposite to Gomera) on the western side of Teneriffe.

Genus 301 **PHYTOSUS\***.

(Rudd) Curtis, *Brit. Ent.* xv 718 (1838)

797 *Phytosus minyops*, n sp

*P* angustissimus, testaceus, opacus, dense cinereo-pubescens, capite vix rufescentiore, elytris brevissimis, abdomine in medio nigricante — Long corp. lin vix  $1\frac{1}{2}$

*Obs* — Species *nigriventris* Chev. affinis, sed angustior, capite pallidior, oculisque minoribus magis rotundatis. A *baltico* Kraatz differt corpore majori pallidior, abdomine densius subtiliusque punctulato et basi pallido (nec nigrescente).

*Phytosus nigriventris*, Woll. [nec Chev.], *Cat. Mad. Col.* 169 (1857)

*Habitat* Fuerteventuram, sub fœcis per oram maritimam semel captus.

\* Lacordaire and Kraatz, following Erichson, have defined *Phytosus* as having merely its front feet 4-articulate, but, after mounting in balsam the whole six legs both of the *nigriventris* and *spinosus*, I am quite satisfied that the *four* anterior tarsi are tetramerous (as indeed was originally, and correctly, stated by Curtis)

The only Canarian example of this *Phytosus* which I have hitherto seen was taken by myself in Fuerteventura—from beneath sea-weed on the sandy beach about a mile to the south of Puerto de Cabras. Although I do not possess at present a Porto-Santan specimen for comparison, I have no hesitation in regarding it as conspecific with the *Phytosus* which I identified (I now believe, wrongly), in my Madeira Catalogue, with the *nigripennis* of more northern latitudes. There can be no doubt that it is very closely allied to that insect, but it is rather narrower, its head is scarcely (if at all) darker than the prothorax and elytra, and its eyes are very appreciably smaller and rounder. In some respects it approaches nearer to the *balticus* of Kraatz, but is larger and altogether paler, and its abdomen (which is more densely and finely punctulated) has the basal half of a rufo-testaceous instead of a piceous hue.

#### 798 *Phytosus spinifer*.

*P. præcedente vix latiori magisque parallelus, niger, opacus, densissime cinereo-pubescent, elytris prothorace sensim longioribus, depressis, postice gradatim plus minus testaceis, antennis (articulo ultimo obscuriore excepto) pedibusque infuscato-testaceis*—Long corp. lin. vix  $1\frac{1}{4}$

*Phytosus spinifer* ?, *Curtis, Brit. Ent.* xv 718 (1838)

— — —, *Kraatz, Nat. der Ins. Deutschl.* ii 44 (1858)

*Habitat* Lanzarotam et Fuerteventuram in locis similibus ac præcedens

Although I have no actual type of the *P. spinifer* for comparison, I believe this to be the *Phytosus* which is referred by Kraatz to that species, and which corresponds with one of the (supposed) series described by Curtis (the other being probably either the *nigripennis* or the *balticus*). It is darker and more parallel than the other *Phytosus* hitherto detected, merely the hinder portion of its elytra (in addition to the limbs) being *gradually* more or less testaceous. Its elytra, likewise, are more flattened and less abbreviated, and its whole surface is very densely clothed with cinereous pubescence,—the entire insect being somewhat suggestive at first sight of a *Philæopora*, or of an excessively diminutive *Aleochara* of the *obscurilla*-type. I have taken it rather commonly from beneath sea-weed on the sandy shores of Lanzarote and Fuerteventura,—namely, to the south of Anicife of the former and of Puerto de Cabras of the latter (in which second locality it was found likewise by Mr. Gray). It will probably occur generally throughout those latitudes, if searched for in the proper places, for I observed it in precisely similar spots at Mogadore on the opposite coast of Morocco.

Genus 302 **PHLÆOPORA.**Erichson, *Kaf der Mark Brand* 1 311 (1837)799 **Phlæopora corticina**, n. sp.

*P* nigro-picea, subopaca, prothorace quadriato, fusciscentiore, elytris rufo-testaceis, versus basin et latera plus minus infuscatis, antennis brevibus, incassatis, ad basin pedibusque testaceis — Long corp. lin  $1\frac{1}{4}$ – $1\frac{1}{2}$

*Habitat* in sylvaticis Teneriffæ et Palmæ, sub cortice arborum latens

Somewhat intermediate between the European *P. reptans* and *corticalis*—agreeing more with the former in its size and colour, but with the latter in its less transverse, subquadrate prothorax. When viewed, however, beneath the microscope, it will be seen to be rather more strongly and sparingly punctured than either of them, and to have its antennæ (if anything) even thicker still. As in the *reptans*, its elytra are almost entirely rufo-testaceous (though perhaps a little more infuscated towards the base and sides), but its prothorax is generally of a paler tint, being for the most part only a shade darker than the elytra. The *P. corticina* I have observed hitherto merely in Teneriffe and Palma—where it is extremely local, occurring under the bark of trees within the sylvan districts of intermediate elevations. In the former I have taken it in the laurel-woods above Taganana and at the Agua Garcia, as well as from beneath the bark of a felled *Pinus canariensis* at the Agua Mansa, and in the latter in the Barrianco de Galga.

Genus 303 **TACHYUSA**Erichson, *Kaf der Mark Brand* 1 307 (1837)800 **Tachyusa raptoria**.

*T* atria, nitida, minutissime et densissime punctulata, subtilissime pubescens, capite ovali, oculis magnis, prothorace subquadriato, integro, elytris apicem versus paulo fusciscentioribus, abdomine postice attenuato, pedibus elongatis, femoribus tibusque picescentibus, tarsis pallide testaceis, posticis longissimis — Long corp. lin  $1\frac{1}{4}$

*Tachyusa raptoria*, Woll, *Ins Mad* 542 (1854)

— —, *Id*, *Cat Mad Col* 170 (1857)

*Habitat* Palmam, Maio exeunte a. d. 1858 exemplar unum in Barrianco de Galga collegi

A single example of this insect, captured by myself in Palma (by the edge of a small stream in the Barrianco de Galga), is the only one which I have as yet seen from the Canaries, and it may therefore, as in Madenia, be regarded as exceedingly rare. Its intensely black hue, elongated legs, and pallid feet (the hinder pair of which are ex-

tremely long), combined with its posteriorly attenuated abdomen, its oval head and large eyes, its subquadrate prothorax, and its *most* minutely (though densely) punctulated surface, will sufficiently distinguish it. Like the *Chilopora*, it is of subaquatic habits—as indeed its general structure and rapid movements would seem to indicate.

### 801 *Tachyusa similima*, n. sp.

*T. depressa*, fusco-nigra, subnitida, densissime punctulata, dense cinereo-pubescent, capite quadrato, in fronte longitudinaliter impresso, oculis parvis, prothorace late canaliculato, elytris vix fuscescentioribus, abdomine nigro, antennis pedibusque infuscato-testaceis.—Long. corp. lin. 1.

*Obs*.—Species *T. sulcata* Kiesenw. nimis affinis, et forsan ejus varietas geographica. Differt solum corpore subminore, subangustiore, elytris subminoribus, punctuâ (præsertim in capite) sensim fortius necnon colore dilutius (sc. magis fuscescente, antennarum pedibusque pallidioribus).

*Habitat* Lanzarotam et Fuerteventuram, sub fucis per oras arenosas maritimas degens.

I am doubtful whether this *Tachyusa* should be regarded as more than a geographical modification of the European *T. sulcata*, nevertheless, since it unquestionably has a few differential features of its own, and as the acknowledged distinctions between the species of this immediate type are very minute, I do not think it should be absolutely identified with that insect\*. It seems to be altogether a trifle smaller and narrower than the *sulcata*, with its elytra somewhat less developed, its punctation (particularly on the head) is a little stronger, and its colour is less black—the head, prothorax, and elytra being appreciably browner and the limbs more testaceous. From the Madeiran *T. maritima* it is abundantly distinct—not merely in its much smaller size and narrower outline, but likewise in its browner hue, its flatter and more sulcated head, and its thicker antennæ (the joints of which are less elongated, or more moniliform). The only two specimens which I have seen were taken by myself (from under sea-weed) on the sandy shores of Lanzarote and Fuerteventura respectively,—namely, to the south of Arrecife of the former and of Puerto de Cabras of the latter.

Genus 304. **XENOMMA**†

Wollaston, *Ins. Mad.* 543 (1854).

\* Dr. Kraatz, to whom I sent one of my specimens for examination, returned it with the remark "*Tachyusa sulcata* Kiesenw. affinis, sed minor, capite fortius punctato."

† Whether *Xenomma* can be retained as a distinct genus, I will not venture to

802 *Xenomma muscicola*, n sp

*X* angusto-lineare, infuscato-testaceum, nitidum, fere impunctatum, capite subrotundato, convexo, oculis minutissimis, prothorace subquadrato, postice paulo rotundato sed vix angustiore, elytris brevissimis, abdomine subparallelo, apicem versus obscuriore, antennis brevibus, fuscescentibus, pedibus testaceis —Long corp lin 1.

*Habitat* Canariam Grandem, in regione El Monte captum

It is not impossible that this somewhat insignificant little insect may be identical with the Madeiran *X filiforme*, nevertheless, as I have no type of that species at present for comparison, I do not think it would be safe to treat it as such. The few examples which I have seen were taken by myself, from beneath moss and fallen leaves, in the region of El Monte in Grand Canary, during the spring of 1858

Genus 305 *HOMALOTA*.

Mannerheim, *Bracon* 73 (1831)

803 *Homalota rufofusca*, n sp

*H* rufo-fusca, subopaca, flavescens-cinereo-pubescent, minutissime (in capite parvissime) punctulata, capite rotundato, oculis parvis, prothorace transverso-subquadrato, postice paulo angustiore et obsoletissime sed latissime canaliculato, elytris brevissimis, antennis ad basin pedibusque testaceis —Long corp lin  $1\frac{1}{2}$

*Habitat* elevatos humidos sylvaticos Teneriffæ, in lauretis supra Tagananam Maio a d 1859 parvissime capta

The subopaque, reddish-brown surface of this *Homalota* (to which its somewhat yellowish pubescence imparts a slightly flavescens tinge), combined with its pallid legs, small eyes, and excessively abbreviated elytra, will serve to distinguish it. I have observed it only in the sylvan districts of a high elevation in Teneriffæ—my few specimens having been obtained from the damp laurel-clad mountains above Taganana

804 *Homalota rufobadia*, n sp

*H* præcedenti similis, sed minor, paulo nitidior minusque pubescens, colore omnino rufescentiore, capite vix magis ovali, oculis etiam

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pronounce positively, but, apart from its secondary characters—of most diminutive eyes, greatly abbreviated elytra, apterous body, &c—it seems impossible to amalgamate it either with *Myrmedonia* or *Homalota* on account of its 5-jointed anterior tarsi, whilst from *Oxyptoda* the structure of its *hinder* feet (which have their articulations of subequal length) will alike remove it. At the same time I must express my conviction that there are few details less satisfactory for establishing genera upon than the tarsi of these minute members of the *Staphylinidæ*, which are often so difficult of observation that the highest powers of the microscope are apt to leave us in doubt as to the precise number of the joints which compose them

subminuibus, prothorace in disco magis depresso, abdomine levius punctulato, antennis pallidioribus ac multo brevioribus, articulis magis transversis (ultimo minus acuto)—Long corp lin  $1-1\frac{1}{2}$

*Habitat* in locis similibus ac præcedens, sed in Palma (nec Teneriffa)

This species seems to have exactly the same habits as the last one, occurring, however, in Palma instead of Teneriffe. It differs from it in being smaller, more shining, and less pubescent, in its head being a little more oval (or less rounded), and with the eyes perhaps even smaller still, and in its colour being a shade darker, or more rufescent,—the antennæ, however (which are much shorter, with their joints more transverse), being paler

#### 805 *Homalota trogophloeoides*, n sp

*H* subdepressa, nigra, subopaca, densissime et grosse fulvescenti-cinereo-pubescent et coriaceo-alutacea, capite ovali, oculis magnis, prothorace transverso-quadrato, angulis posticis acute determinatis, postice in medio levissime sed latissime impresso, elytris quadratis, antennis brunneis, ad basin pedibusque testaceis—Long corp lin  $1\frac{1}{3}-1\frac{1}{2}$

*Habitat* Fuerteventuram, sub fucis in arenosis maritimis latens

This most distinct *Homalota* (which was examined by Kraatz, and regarded by him as new) seems to be a littoral species, residing beneath marine *rejectamenta* on the sandy shores. In such situations it was taken by Mr Gray and myself, at the end of January 1858, about a mile to the south of Puerto de Cabras in Fuerteventura. Its very square elytra and general contour, combined with its subopaque surface and dark hue (the legs alone being pale), give it somewhat the *primâ facie* appearance of a large *Trogophloeus*, and it is further remarkable for its rather coarse fulvo-cinereous pubescence, and for its (transverse-quadrate) prothorax having the posterior angles sharply defined

#### 806 *Homalota amnicola*, n sp

*H* subdepressa, nigra, subopaca, dense pubescens, alutacea, capite subrotundato, oculis magnis, prothorace angustulo, subquadrato, basi foveolâ mediâ impresso, elytris latiusculis, quadratis, antennis pedibusque longiusculis, illis ad basin vix dilutionibus, his infusato-testaceis—Long corp lin  $1\frac{1}{4}-2$

*Habitat* Canariam, Teneriffam, Gomoram et Palmam, ad margines rivulorum in intermediis (præsertim sylvaticis) degens

This rather large *Homalota* (which was examined by Dr Kraatz, and considered to be new) appears like the *H. qiegana*, the Madeiran *H. obliquepunctata*, &c, to be of subaquatic habits—residing beneath

stones and shingle at the edges of the small streams at intermediate elevations, particularly within the sylvan districts. In such situations I have taken it in Grand Canary, Teneriffe, and Palma, and in Gomera it was found by Dr. Clotch. My Teneriffan examples are from the Agua Garcia (where it abounds), Las Mercedes, La Esperanza, and Ycod el Alto. It is slightly blacker than the *obliquepunctata*, and relatively a little broader (both its head and elytra being appreciably more developed), its antennæ also are distinctly darker, and its elytra are not quite so flattened, and (although sometimes very obscurely *impressed*) free from the few rounded punctiform foveæ which are placed obliquely across either disc in that species. Its pubescence likewise is a shade darker, or less fulvescent.

### 807 *Homalota gregaria*

*H.* subparallela, depressa, nigra, subopaca, minute fulvescenti-cinereo-pubescent, capite rotundato, prothorace subquadrato, basi rotundato et foveâ mediâ impresso, elytris postice gradatim lundo-testaceis, antennis brunneis, pedibus infuscato-testaceis, femoribus pubescentibus.

*Variat* (largius) elytris omnino concoloribus.—Long corp. lin.  $1\frac{1}{3}$ —vix  $1\frac{2}{3}$ .

*Homalota gregaria*, *Erich*, *Gen. et Spec. Staph.* 87 (1839).

*Tachysa immunita*, *Id.*, *Gen. et Spec. Staph.* 916 (1839).

*Homalota gregaria*, *Woll.*, *Ins. Mus.* 550 (1854).

—, *Id.*, *Cat. Mus. Col.* 174 (1857).

*Habitat* in inferioribus intermedisque Lanzasotæ, Fuerteventuræ, Canariæ, Teneriffæ et Gomeræ, inter lapillos per margines rivulorum hinc inde abundans.

The *H. gregaria*, so widely spread over Europe, and which occurs in the Madenan Group, is probably universal at the Canaries—though hitherto I have myself detected it only in Lanzarote, Fuerteventura, Grand Canary, and Teneriffe (in the first of which it was taken likewise by Mr. Gray). It was, however, captured by Dr. Clotch in Gomera. It is more particularly abundant at low and intermediate elevations, residing at the edges of the small streams. It may be known by its rather parallel outline and depressed, subopaque surface, by the small fovea at the base of its posteriorly-rounded prothorax, by its elytra being *gradually* of a more or less lurid-testaceous hue behind, by its brown and somewhat robust antennæ, and by the femora of its palld legs being more or less infuscated.

### 808 *Homalota amnigena*, n. sp.

*H.* depressa, fusco-nigra, subopaca, dense pubescens, capite rotundato-ovali, prothorace subquadrato, leviter canaliculato, canalicula

in foveam parvam mediam basalem mergente, antennis ad basin infuscato-, pedibus pallido-testaceis —Long corp  $\ln 1\frac{1}{4}$ —vix  $1\frac{1}{2}$

*Habitat* in Teneriffa, Palma et Hierro, per margines rivulorum necnon in humidis intermediis (praesertim sylvaticis), rarior.

In habits and general contour this little *Homalota* has much in common with the last two species. It is, however, much smaller than either of them, of a browner or more piceous hue, and its elytra are scarcely a shade paler than the head and prothorax. Its head, also, is, if anything, a trifle more oval (or less rotundate), its prothorax is lightly channeled, and its legs are extremely pale\*. Like the *H. obliquepunctata*, it seems to reside at the edges of the small streams, and on the damp ledges of rocks, at intermediate elevations, particularly within the sylvan districts. In such situations I have taken it sparingly at the Agua Garcia, Souzal, La Esperanza, and at Las Mercedes, in Teneriffe, as well as in similar localities both in Palma and Hierro. Teneriffan specimens have also been communicated by Dr Crotch.

#### 809 *Homalota persimilis*, n sp

*H. praecedenti* valde affinis, sed paulo minor angustior et densius sed etiam subtilius pubescens, sculpturâ (oculo fortissime armato) multo densiore (sc. densissimâ) et paulo fortiore, capite sensim minore, rotundatione, prothorace subbrevisiore, basi sublatiore, elytris vix minoribus, antennis pedibusque paulo brevioribus gracilioribus, his vix magis infuscatis —Long corp  $\ln 1\frac{1}{4}$

*Habitat* in inferioribus Teneriffæ, prope Portum Orotavæ (per aerem volitantem) deprehensa.

Judging from the single individual now before me, the *primâ facie* aspect of this insignificant *Homalota* is very much that of the *amnigena*, nevertheless I am quite satisfied that it is altogether distinct specifically, as indeed its habits would seem to imply—it having been captured by myself immediately outside the Puerto Orotava in Teneriffe (scarcely above the sea-level), whilst that insect is essentially one of intermediate elevations. It is a little smaller and narrower than the *H. amnigena*, as also still more densely and minutely pubescent, its head is perceptibly smaller and rounder, its prothorax is shorter, and a trifle broader behind, its elytra are somewhat less developed, its limbs are appreciably shorter and slenderer, with the legs more infuscated, and its entire sculpture, when viewed beneath the microscope, will be seen (particularly on the abdomen) to be *very* much closer and rather more coarse.

\* It was examined by Kraatz, who returned it as "*Homalota*, n sp."

810. *Homalota longula*.

*H* angusto-linearis, depressa, nigra, subnitida, pubescens, confertissime subtilissimeque coriaceo-alutacea, capite punctulis levissimis obscuris superadditis dense obsito, in fronte foveolato, prothorace subquadrato, canaliculato, elytris vix fuscescen- tioribus, abdomine confertissime subtilissimeque punctulato, antennis gracilibus, nigro-fuscis, pedibus brevibus, saturate testaceis — Long corp lin 1

*Homalota longula* (*Chevrier*), *Heer, Fna Col Helv* 334 (1841)

—— *thinobroides*, *Kraatz, in Stett Ent Zeit* xv 125 (1854)

—— —, *Id, Nat der Ins Deutsch* ii 228 (1856)

—— —, *Woll, Cat Mad Col* 175 (1857)

*Habitat* Lanzarotam et Teneriffam, inter lapillos ad margines aquarum degens

The exceedingly dense and fine sculpture of this small and narrow *Homalota* (the head, prothorax, and elytra of which are most minutely and closely coriaceo-alutaceous, whilst the abdomen is almost as minutely and closely punctulated), combined with its depressed surface, parallel outline, slender antennæ, and rather short legs, will serve to distinguish it. When viewed beneath the microscope, its head will be seen (in addition to the dense alutaceous sculpture) to be somewhat thickly but very lightly subpunctulated. Like the allied species, it is of subaquatic habits, residing amongst wet stones and shingle at the edges of streams and pools. It is probably common throughout the Group, though, being so small and insignificant, I do not happen to have observed it very generally. I have, however, taken it sparingly in Lanzarote, as well as near S<sup>ta</sup> Cruz in Teneriffe. It occurs also in Madeira.

811. *Homalota fragilis*

*H* præcedenti valde similis, sed punctulis superadditis in capite (oculo fortissime armato) minoribus remotioribus (sc minutissimis, ægerime observandis), abdomine paulo nitidiore et multo paucius sed parum profundius punctulato, pedibus pallidioribus (minus infuscatis) — Long corp lin 1

*Homalota fragilis*?, *Kraatz, in Stett Ent Zeit* xv 125 (1854)

—— —?, *Id, Nat der Ins Deutsch* ii 223 (1856)

*Habitat* Teneriffam, Gomeram et Palmam, in locis similibus ac præcedens

Without the aid of the microscope this species is scarcely separable from the preceding one, with which in its general *facies* it is almost coincident. Nevertheless, when placed under a high magnifying power, its abdomen will be seen to be very much less closely and rather more coarsely punctulated and with the additional punctules

which stud its (densely alutaceous) head considerably smaller and more remote—indeed but *just* traceable. Its abdomen (through being more sparingly punctured) is a little less opaque, and its legs are usually less infuscated, or of a slightly clearer testaceous hue. I believe it to be identical with the European *H. fragilis*, nevertheless, as it is very possible to be mistaken in species thus small and obscure, I have cited it as such with a mark of doubt. It occurs in precisely the same kind of places as the *H. longula*. I have taken it in the Barranco Santo (near S<sup>ta</sup> Cruz) in Teneriffe, near San Sebastian of Gomera (in which island it was found likewise by Dr. Crotch), and in Palma.

### 812 *Homalota cursitans*, n. sp.

*H.* angustulo-linearis, nigra elytris fusciscentibus, nitida, parce pubescens, densissime subtilissimeque alutacea punctulisque minutis inornata, capite subrotundato, prothorace transverso-subquadrato, angulis posticis sat acute determinatis, abdomine grosse sed parce asperato-punctato, antennis pedibusque brevibus, crassis, illis ad basin vix dilutioribus, his infuscato-testaceis.—Long corp. lin. 1½.

*Habitat* Lanzarotam, ultra oppidum Haria parce capta.

This little species I have observed hitherto only in the north of Lanzarote—chiefly beneath the refuse around the roots of the old Euphorbias on the rocky declivities of the “Risco.” Its narrow, linear outline and densely alutaceous (though, at the same time, rather shining) surface, which is studded with small additional punctules, combined with the tolerably well-defined hinder angles of its prothorax, its brownish elytra, very thick antennæ, and infuscated-testaceous legs, are some of its principal features.

### 813 *Homalota subsericea*, n. sp.

*H.* præcedenti similis, sed minor, subangustior, punctulis superadditis (oculo fortissime armato) etiam minoribus, valde indistinctis, capite vix magis quadrato, prothorace vix brevior, angulis posticis rotundatis, fere obsoletis, elytris singulis in disco obsolete impressis, antennis vix brevioribus minusque incrassatis.—Long corp. lin. 1.

*Habitat* Lanzarotam, in eodem locis ac præcedens.

This *Homalota* is very closely allied to the last one, and is found (so far as I have observed hitherto) in the same district—namely, the north of Lanzarote. It differs from it in being smaller and rather narrower, and in the punctules of its (densely alutaceous) surface being still more obscure and minute, in its elytra being obsoletely impressed on either disc, in its antennæ being appreciably shorter and less incrassated, and (above all) in the hinder angles of its prothorax being more rounded off (or less defined). I am far from satisfied that

it is more than a geographical phasis of the European *H senicea*, Mulsant, from which it seems merely to differ in its rather more fuscous hue, in its forehead being marked with a central fovea, in its elytra being obscurely impressed on either disc, in the asperated punctules of its abdomen being somewhat coarser, and in its antennæ being (if anything) just perceptibly shorter

814 *Homalota angustissima*, n sp

*H* minuta, angustissime linearis, fusco-nigra elytris fuscis, nitida, parce pubescens, densissime subtilissimeque alutacea (punctulis superadditis vix, etiam oculo fortissime armato, observandis), capite magno, breviter oblongo, prothorace subquadrato, angulis posticis subrotundatis, abdomine parvissime sed distincte punctulato, pedibus testaceis — Long corp ln  $\frac{3}{4}$

*Habitat* Lanzarotam, semel tantum reperta

The excessively narrow and parallel outline of this diminutive *Homalota*, which (on account of its large and oblong head being as broad as the prothorax, and the latter scarcely narrower than the elytra) is of almost equal breadth throughout, in conjunction with its fuscous elytra, pale legs, and (except on the abdomen) nearly obsolete punctules, will suffice to separate it from its allies. The specimen from which the diagnosis has been compiled was taken by myself in the north of Lanzarote

815 *Homalota misella*, n sp

*H* minuta, angusto-linearis, nigra prothorace elytrisque fuscis, parce pubescens, densissime subtilissimeque alutacea punctulisque minutissimis parce (in elytris parum profunde) imbricata, capite magno, rotundato, oculis parvis, prothorace brevi, subsemicirculari, elytris brevissimis, antennis pedibusque brevibus, saturate testaceis — Long corp ln  $\frac{3}{4}$

*Habitat* ins Hierro, sub cortice *Euphorbiæ* cujusdam laxo emortuo putrido in regione El Golfo semel reperta

Having but a single example of this minute insect to judge from, I am unwilling to run the risk of dissecting it in order to examine the details of its structure, but its very narrow outline, much abbreviated elytra, and small eyes render it possible that it may be in reality a *Xenomma*. It was taken by myself, from beneath the dead bark of an old *Euphorbia*, in the region of El Golfo, on the western side of Hierro, during February 1858

816 *Homalota nigra*

*H* angustulo-sublinearis, depressa, nigra, subopaca, minute pubes-

cens, densissime subtilissimeque (vix perspicue) alutacea punctulisque minutis levibus crebrie minorata, prothorace tenuissime canaliculato, pedibus paulo dilutioribus (sc nigro-testaceis), tarsis fore testaceis —Long corp lin 1

*Homalota nigra*, *Kuatz, Nat der Ins Deutsch* ii 287 (1858)

*Habitat* insulas Canarienses, in Fuerteventura solà adhuc haud detecta

The small size, rather flattened, minutely pubescent, very slightly shining surface, and deep-black hue of this little *Homalota* (the legs alone, which are blackish testaceous, being slightly paler) will sufficiently distinguish it. It is doubtless universal throughout the archipelago, in all the islands of which, except Fuerteventura and Gomera, I have myself captured it, and an extensive series of Gomeran specimens are now before me which were taken by Dr Crotch. It remains, therefore, to be detected only in Fuerteventura. It is more common within the sylvan districts of intermediate altitudes than elsewhere (and therefore rarer in the two eastern islands of the Group)—occurring beneath fallen leaves and other vegetable refuse. My Grand-Canarian examples are principally from the region of El Monte, the Teneriffan ones from the hills towards Laguna, Taganana, Las Mercedes, the Agua Garcia, La Esperanza, the Agua Mansa, Ycod el Alto, and even from so low an elevation as the vicinity of St<sup>a</sup> Cruz and the Puerto Orotava, and the Palman ones from the Barranco de Galga. I cannot see that it differs appreciably from the European *H nigra*, to which I have accordingly referred it.

### 817 *Homalota aleocharoides*, n sp

*H* subconvexa, fusca capite nigrescentiore, subnitida, dense pubescens, parce minuteque punctulata, prothorace transverso, versus latera interdum obsolete subpellucido-pallidior, antennis nigrescentibus, ad basin pedibusque saturate testaceis —Long corp lin 1

*Habitat* Teneriffam, a W D Crotch sat copiose lecta

At once known from the preceding species by its broader (and somewhat shorter) outline, convexer, unalutaceous, sparingly punctured surface, and browner hue (the head alone being quite black), by its prothorax having a very obscure tendency to become a little paler (or subpellucid) towards either side, and by its legs being testaceous. It is an insect which I did not myself observe at the Canaries, but of which a rather extensive series is now before me which was taken by Dr Crotch (during the spring of 1862) in Teneriffe. *Primâ facie* it is somewhat suggestive of a very minute *Aleochara*, as indeed I have implied in its trivial name.

818 *Homalota atramentaria*.

*Aleochara atramentaria* (*Kby*), *Gyll*, *Ins Suec* n 408 (1810)

*Homalota atramentaria*, *Erich*, *Gen et Spec Staph* 111 (1839)

— —, *Woll*, *Ins Mad* 555 (1854)

— —, *Id*, *Cat Mad Col* 178 (1857)

*Habitat* insulas omnes Canarienses, in stercore bovino vulgaris

The deep-black hue of the European *H atramentaria* (the legs of which are dark piceous, with the tarsi pale), in conjunction with its somewhat slender limbs and its rather flattened, densely pubescent, thickly punctulated (and alutaceous) head, prothorax, and elytra, which have usually a just perceptible ænescent tinge, will readily distinguish it. It abounds throughout the Madeiran Group, and is equally universal at the Canaries—in the whole seven islands of which except Gomeira (where it was found both by Mr Gray and Dr Crotch) I have myself captured it. My Teneriffan specimens are principally from the neighbourhood of S<sup>ta</sup> Cruz and the Puerto Orotava, Ycod el Alto, the Agua Mansa, and Taganana. It occurs principally in the dung of cattle.

819 *Homalota læta*, n sp

*H* subnitida, parce pubescens, densissime alutacea punctulisque sat crebre (in capite nigro parce) subasperata, prothorace rufo-ferrugineo, postice in medio impresso, elytris rufo-ferrugineis, hinc inde (præsertim versus latera) obscure infuscato-suffusis, abdomine nigro, basi et præsertim ad apicem rufo-ferrugineo, antennis nigrescentibus, ad basin pedibusque testaceis—Long corp lin  $1\frac{1}{2}$

*Habitat* Gomeram, tria specimina cepit W D Crotch

The black head and rufo-ferruginous prothorax and elytra (the latter of which, however, are much infuscated in parts—especially towards the sides and scutellum) of this beautiful *Homalota*, combined with the rufo-ferruginous apex of its abdomen and its pale-testaceous legs, will at once characterize it. Its general aspect and colouring are more in accordance with the fungivorous species, but as I have not captured it myself, I am unable to vouch for its habits. The only three examples which I have seen were taken by Dr Crotch in Gomeira, during the spring of 1862. It is most nearly allied to the Madeiran *H insignis*, with which in colouring it is almost coincident, and of which it is barely possible that it may be but a geographical state. It differs from that insect, merely, in being a little smaller and narrower, in its head being more oval (or less transverse), and in its prothorax being much more deeply (and rather more sparingly) punctured, whilst the sculpture of its abdomen is, if anything, somewhat denser and coarser.

820 *Homalota canariensis*

*H* angusto-linearis, alutacea, subopaca, minute et parvo punctulata, pubescens, capite nigro, fronte depressâ, oculis magnis prominentibus, prothorace subquadrato, rufo-fusco, canaliculato, elytris fusco-testaceis, ad latera (præsertim versus angulos posticos) suffuse nigrescentibus, abdomine fusco-testaceo, pone medium nigrescente, antice subconsticto, antennis brevibus, crassis, articulo primo magno, ultimo breviusculo, nigro-fuscis, ad basin pedibusque testaceis—Long corp. lin  $1\frac{1}{2}$ – $1\frac{1}{3}$

*Homalota canariensis*, *Woll, Trans Ent Soc Lond* 184 pl 7 f 8 (1862)

*Habitat* Teneriffam et Gomeiam, in caulibus putridis *Euphorbia canariensis* hinc inde parum vulgaris

The narrow outline, subopaque alutaceous surface, basally-narrowed abdomen, depressed forehead, and prominent eyes of this curious *Homalota*, combined with its thick and abbreviated antennæ (the first joint of which is much enlarged, whilst the terminal one is comparatively short and oval), will at once distinguish it. Its colour, too, is somewhat peculiar—the head and subapical abdominal segments being black, whilst the prothorax is reddish brown, the elytra (which are more or less darkened towards the outer posterior angles) and the base of the abdomen are brownish testaceous, and the legs are extremely pale. I have observed it hitherto only in the putrid stalks of the *Euphorbia canariensis*—under which circumstances I took it plentifully in Gomera, during February 1858, on a hill-top to the north-west of San Sebastian, and subsequently, in similar situations, on the mountains above St Cruz of Teneriffe, in the direction of El Campo and Laguna. In Teneriffe it was captured likewise by Dr Crotch.

821 *Homalota vagepunctata*

*H* nitidissima, parvo sed grosse pubescens, parvissime punctata (nullo modo alutacea), nigra prothorace elytrisque castaneo-fuscescentibus (his interdum etiam subtestaceo-tinctis), capite parvo, rotundato, prothorace transverso, convexo, postice rotundato, obsoletissime canaliculato, antennis gracilibus, ad basin pedibusque saturate testaceis—Long corp. lin  $1$ – $1\frac{1}{4}$

*Homalota vagepunctata*, *Woll, Trans Ent Soc Lond* 187 (1862)

*Habitat* Lanzarotam et Fuerteventuram, præsertim illam, inter *Euphorbias* præcipue degens

The exceedingly shining and very sparingly punctured surface of this *Homalota*, in conjunction with its small, rounded head and slender antennæ, its coarse but distant pubescence, its convex, dark-brown, basally-rounded prothorax, and its more or less castaneous elytra, will

sufficiently distinguish it I have observed it hitherto only in Lanzarote and Fuerteventura, especially the former—where it is not uncommon amongst the old Euphorbias (frequenting even their *flowers*) on the Risco, in the extreme north of the island

### 522 *Homalota clientula*

*H* præcedenti similis, sed paulo minus nitida (tamen vix alutacea), densius pubescens et multo crebrius punctata (punctis minoribus ac levioribus), prothorace sensim latiore, angulis posterioribus vix omnino obsoletis, elytris densissime subasperato-punctulatis, antennis vix longioribus et crassioribus

*Variat* prothorace elytrisque aut fere nigris, aut fusciscentibus, aut etiam clare rufo-ferrugineis —Long corp lin 1-1½

*Homalota clientula*, *Erich*, *Gen et Spec Staph* 133 (1839)

—— *plebeia*, *Woll*, *Ins Mad* 553 (1854)

——, *Id*, *Cat Mad Col* 176 (1857)

—— *clientula*, *Klätzsch*, *Nat der Ins Deutsch* II 322 (1858)

*Habitat* insulas Canarienses, sub quisquiliis, in Gomera solâ adhuc haud observata

Although extremely variable in the colour of their elytra and prothorax (which, although sometimes nearly black, are usually more or less diluted in hue, and occasionally of a clear rufo-ferruginous\*), an extensive series of specimens now before me seem all referable to a single species, and that one (so far as I can judge) not differing from the European *H clientula*. Nevertheless there are many shades of colouring, and some diversity of outline†, amongst the mass of individuals from which the above diagnosis has been compiled, though, in the details of their sculpture, and the shape and size of their ultimate antennal joint (two of the main characters of the species) they show but little tendency to variation. Assuming them therefore to be all referable to the *H clientula*, which I believe to be the case, I may add that I have no doubt the insect is universal throughout the archipelago—Gomera being the only island in which it does not happen to have been observed. In the remaining six islands of the Group I have myself captured it, more or less abundantly, and in

\* Erichson mentions a variety, found by Prof Eichenberg in Egypt, in which the prothorax and elytra are rufo-testaceous

† The difference of outline is perhaps more apparent than real, for the general *facies* of these minute members of the *Staphylinidae* is marvellously dependent upon the exact manner in which they happen to be *mounted* for the cabinet. Thus, in the species of this immediate type, in which the prothorax is much rounded behind, if the head is at all deflexed the whole of the elytra are exposed, and appear consequently to be “well developed”, but if, on the contrary, the head is by chance raised, the posterior edge of the pronotum saps over the base of the elytra, and occasions the latter to seem (*primâ facie*) as though unusually abbreviated

Teneriffe it was also found by Dr Crotch. It occurs principally beneath fallen leaves, and other vegetable refuse, at intermediate elevations. My Fuerteventuran examples are chiefly from the Rio Palmas, the Grand-Canarian ones from the region of El Monte, and the Teneriffan ones from the Agua Garcia, the Agua Mansa, and Taganana.

### 823 *Homalota coriaria*.

*Homalota sodalis*, Woll [nec Erich, 1837], *Ins. Mad.* 551 (1854)  
 — *coriaria* (Müller), Kraatz, *Nat. der Ins. Deutschl.* ii 282 (1856)  
 — —, Woll, *Cat. Mad. Col.* 177 (1857)

*Habitat* insulas Canarienses, in Fuerteventura et Hierro solis hactenus haud detecta.

The somewhat broad outline and finely punctulated surface of the *H. coriaria*, combined with its rather large head, its short and transverse prothorax (which is very widely, though lightly, impressed in the centre behind), its brownish elytra (which are more or less obscured, or blackened, towards either side and in the region of the scutellum), its dusky-testaceous legs, and its extremely thickened antennæ, will readily distinguish it. It is common throughout Europe and abounds in Madeira, and I have little doubt that it is universal at the Canaries—Fuerteventura and Hierro being the only islands in which, hitherto, it does not happen to have been observed. I have, however, myself taken it in Lanzarote, Grand Canary, Teneriffe, Gomera, and Palma, and it was found in Teneriffe by Dr Crotch. It occurs beneath vegetable refuse generally—often within the putrid stems of the dead Euphorbias (in which situations I have captured it on the mountains above St<sup>a</sup> Cruz in Teneriffe, as well as above San Sebastian in Gomera). My Teneriffan examples are principally from the Agua Mansa and Ycod el Alto.

### 824 *Homalota subcoriaria*, n. sp.

*H. coriariae* valde affinis, sed vix ejus varietas, sensim minor et subdensius punctulata, antennis paulo brevioribus, magis compactis (articulis inter se magis acute adpressis), prothorace vix angustiore, postice paulo magis rotundato (angulis posticis minus determinatis), in disco postico canaliculato sed haud late impresso, elytris vix minoribus—Long corp. lin. 1.

*Habitat* Gomeram, in *Euphorbia canariensis* quadam putrida supra Sanctum Sebastianum semel tantum lecta.

A single specimen of a *Homalota* taken by myself in Gomera (in company with the *H. coriaria*, *putrescens*, and *canariensis*), out of some rotten *Euphorbia*-stems on the hills above San Sebastian, seems to differ so decidedly from the *coriaria* (which nevertheless it

closely resembles) that I cannot but regard it as an additional, though nearly allied, species. It recedes from that insect in being a trifle smaller and more densely punctulated, in its antennæ being shorter and more compact (the joints being more intimately connected *inter se*), in its prothorax being a little narrower, and more rounded behind, with the posterior angles less defined, and with the disc lightly channeled but *not* widely impressed, and in its elytra being, if anything, somewhat less developed.

### 825 *Homalota putrescens*

*H. subnitida*, densissime alutacea punctisque (in capite abdomineque paucius) sat dense nrorata, nigra, elytris testaceis, versus angulos posticos externos necnon in regione scutellari nigrescentibus, prothorace vix picescente, transverso, lato, postice rotundato, antennis crassis, articulo ultimo longiusculo, nigro-fuscis, ad basin pedibusque testaceis — Long corp. lin  $1\frac{1}{2}$

*Homalota putrescens*, Woll., *Trans. Ent. Soc. Lond.* 1 185 (1862)

*Habitat* Lanzarotam, Canariam et Gomeiam, in truncis *Euphorbiae* emortuis putridis degens.

The short and very wide prothorax of this species, which has the hinder angles almost completely rounded off, in conjunction with its thick antennæ and its testaceous elytra and legs (the former of which are more or less conspicuously darkened towards the outer posterior angles and in the region of the scutellum and suture), will serve to distinguish it. I have taken it sparingly, out of the damp rotting *Euphorbia*-stems, in Lanzarote, Grand Canary, and Gomera, and it will probably occur, like the *H. coriaria*, beneath decaying vegetable refuse generally.

### 826 *Homalota cacti*

*H. præcedenti* similis, sed puncturâ leviori et parciore, prothorace angustiore, minus transverso, ad angulos posticos minus rotundato, antennarum articulo ultimo sensim minus elongato et paulo magis obtuso — Long corp. lin  $1\frac{1}{2}$

*Homalota cacti*, Woll., *Trans. Ent. Soc. Lond.* 1 186 (1862)

*Habitat* Teneriffam et Palmam, in illâ in truncis *Euphorbiæ canariensis* putrido in montibus supra Sanctam Crucem, sed in hac in foliis marcidis *Cacti opuntiae* lecta.

In size and general colouring this *Homalota* is almost coincident with the *putrescens*, but its prothorax is very much narrower (or less transverse), with the posterior angles less rounded off, its punctation is both finer and more distant, and the terminal joint of its antennæ is a trifle shorter and more obtuse. It is closely allied to the Euro-

pean *H. sublinearis*, Kraatz, but is smaller and less coarsely alutaceous, its pubescence is less elongated and not so pale, its head and prothorax are appreciably smaller, and its antennæ are darker and shorter. I have taken it out of a putrid stalk of the *Euphorbia canariensis* on the mountains above S<sup>ta</sup> Cruz in Teneriffe, and more abundantly in the sodden leaves of the prickly pear in the Banda of Palma.

827 *Homalota terricola*, n. sp.

*H.* affinis *H. cacti*, sed major, profundius densiusque punctata, prothorace paulo majore, sublatis, converis, ad angulos posticos sensim minus rotundato, elytris magis suffuse coloratis, antennis longioribus et paulo crassioribus, articulo ultimo vix longiore.

*Var. β* Paulo minor, prothorace vix minore, antennis sub brevioribus.—Long corp. lin.  $1\frac{1}{2}$ – $1\frac{1}{4}$ .

*Habitat* Lanzarotam et Palmam, sub quibus, rarior.

This *Homalota* is much on the same type as the preceding two species, but is certainly distinct from both of them—being larger, with its antennæ longer and more robust, its hinder prothoracic angles somewhat less rounded off, and its elytra more suffused in colouring (or less maculated). Its punctation is rather dense and strong, like that of the *H. putrescens*, but its prothorax is less abbreviated and not so wide, though a little broader than in the *H. cacti*. It appears to be scarce, the few examples which I have seen having been taken by myself, from beneath vegetable refuse, in Lanzarote and Palma. The only specimen, however, from the latter island, together with one (of the four) from Lanzarote, are a trifle smaller than the rest, with their prothorax and antennæ a little less developed, but I do not believe that they are specifically distinct, and have consequently treated them as a “var. β”.

828 *Homalota Waterhousei*, n. sp.

*H.* subnitida, densissime alutacea punctisque (in capite abdomineque parcius) sat dense irrorata, grosse pubescens, subfusco-nigra elytris in disco vix dilutioribus, prothorace transverso-subquadrato, postice paulo rotundato et in medio foveolato, antennis elongatis, ad basin paulo dilutioribus, pedibus testaceis.—Long corp. lin.  $1\frac{1}{4}$ –vix 2.

*Habitat* in editioribus Teneriffæ, usque ad 8000' s. m. ascendens. Species in honorem cl. G. R. Waterhouse, Londini, Staphylinorum Britannicæ scrutatoris oculatissimi indefessi, citata.

. This rather large *Homalota* has been observed hitherto only in the higher elevations of Teneriffe, where moreover it would seem to be scarce. I have taken it sparingly near Ycod el Alto, as well as at

the Agua Mansa and on the Cumbre above it (upwards of 8000 feet above the sea), and a single Teneiffan specimen is now before me which was captured by Dr Crotch. It appears to be, on the average, slightly larger and narrower than the *H. tenicola*, rather more coarsely pubescent, and more concolorous (its general surface being of a somewhat browner black, whilst its elytra, on the contrary, are darker or less diluted in hue), its head and prothorax are relatively a little smaller, its punctuation, particularly on the elytra, is a trifle denser, and its antennæ are appreciably slenderer and darker.

### 829 *Homalota melanaria*

*Aleochara melanaria*, *Sahlb*, *Ins Fenn* 1: 398 (1834)

*Homalota lividipennis*, *Erich*, *Gen et Spec Staph* 129 (1839)

— —, *Woll*, *Ins Mad* 557 (1854)

— —, *Id*, *Cat Mad Col* 179 (1857)

*Habitat* insulas omnes Canarienses, in stercore bovino et equino vulgaris

This common European insect, which abounds in the Madeiran Group, and which is so well distinguished by its posteriorly acute outline, its large and wide prothorax, its testaceous elytra (which are more or less infuscated in the region of the scutellum and at the sides), and its long, robust, brownish antennæ, is universal throughout the archipelago, in all the islands of which except Gomera (where it was found by Dr Crotch) I have myself captured it. In Fuerteventura, Teneriffe, and Palma it was met with likewise by Mr Gray. It occurs principally in the dung of cattle, and is independent of elevation, for in Teneriffe I have taken it from the level of the shore, at Sta Cruz and the Puerto Orotava, to the Cumbre adjoining the Cañadas (upwards of 8000 feet above the sea).

### Genus 306 OXYPODA

Mannerheim, *Brachel* 69 (1831)

### 830 *Oxypoda exoleta*

O rufo-ferruginea, subopaca, dense sericeo-pubescent, dense et minute punctulata, capite abdominisque segmentis intermedis, necnon elytris (sed obscurius ac magis suffuse) versus angulos externos et in regione scutellari, plus minus nigrescentioribus, antennis fuscis (articulo ultimo crassiusculo), ad basin pedibusque testaceis. — Long corp lin 1-1½

*Oxypoda exoleta*, *Erich*, *Gen et Spec Staph* 149 (1839)

— —, *Kautz*, *Nat der Ins Deutsch* 11: 179 (1856)

— lunda, *Woll*, *Cat Mad Col* 179 (1857)

*Habitat* in Lanzarote, Canaria, Teneriffa, Palma et Hierro, rarior

After a careful inspection of many examples of this *Oxyptoda*, found in five different islands of the Group, it seems to me that it ought not to be kept distinct from the European *O. exoleta*, though, as it is clearly conspecific with my *O. lurida*, which occurs sparingly in Madeira, this will necessitate the suppression of the latter name. In the majority of the specimens now before me, the head, prothorax, and elytra are *just perceptibly* larger, or more developed, than is the case in the ordinary English ones, and as this was likewise traceable in the few Madeiran individuals which I possessed for examination in 1857, I thought it safer to record them as the exponents of a closely allied species. But further material has convinced me that these differences are scarcely more than casual ones—or, even if permanent, much too insignificant to indicate more than a slight geographical modification of the insect. Indeed the species would appear to be eminently variable in stature, so that a certain amount of instability would naturally be anticipated in the development of its external parts.

The narrow outline and rufo-feruginous hue of the *O. exoleta* (its head and the intermediate segments of its abdomen being alone conspicuously darkened—though the elytra are always *more or less* obscurely infuscated) will sufficiently distinguish it. I have taken it, from beneath stones, between Hama and Mágu, in the north of Lanzarote, in the region of El Monte in Grand Canary, above the Puerto Orotava in Teneriffe, as well as in Palma and Hierro and several Teneriffan examples are now before me which were found by Dr. Clotch.

### 831 *Oxyptoda brevipennis*, n. sp.

*O.* rufo-testacea, subopaca, dense sericeo-pubescent, dense et minute punctulata, capite angusto, ovato, oculis minutis, elytris brevissimis, antennis pedibusque testaceis.—Long corp. lin. 1.

*Habitat* in sylvaticis parum excelsis Teneriffæ et Gomæræ, sub foliis dejectis necnon inter muscos, rarissima.

The uniformly pale, rufo-testaceous hue of this singular *Oxyptoda*, combined with its narrow, ovate head, very minute eyes, and excessively abbreviated elytra, will at once characterize it. It is a good deal allied to the *O. formiceticola* of more northern latitudes, but is rather smaller, narrower, and paler, with its eyes still more diminutive, its head much narrower, its prothorax relatively longer, its punctation finer and denser, and its antennæ somewhat less incrassated towards their apex. It seems to be confined to the sylvan districts of rather lofty elevations, where, however, it is decidedly rare. I have taken it from beneath fallen leaves and moss in the laurel-woods

above Taganana and on the summit of the Las Mercedes range in Teneriffe, and a single example is now before me which was captured by Dr Crotch in Gomera—I believe, above Hermigua

### 832 *Oxyptoda æthiops*, n sp

*O. atia*, nitida, parce pubescens, minus dense ac profundius subasperato-punctata, capite subrotundato, convexo, elytris convexis, antennis pedibusque concoloribus—Long corp lin 1

*Habitat* Palmam, in “Barranco da Agua” semel reperta

The intensely black hue of this small *Oxyptoda*, combined with its shining, less pubescent, rather deeply and less densely punctured surface, will readily separate it from the two preceding species. Hitherto I have seen but a single example of it, which was taken by myself in the Barranco da Agua of Palma

## Genus 307 **ALEOCHARA.**

Gravenhorst, *Col Micropt* 67 (1802)

### 833 *Aleochara puberula*

*Aleochara puberula*, *Klug, Col Madagasc* 51 (1833)

— —, *Erich, Gen et Spec Staph* 165 (1839)

— —, *Aimitager, Woll, Ins Mad* 559 (1854)

— —, *puberula, Id, Cat Mad Col* 180 (1857)

*Habitat* Lanzarotam, Fuerteventuram, Canariam, Teneriffam et Gomeram, sub quisquilis necnon in stercore bovino, equino, camelino degens

The fusiform outline and closely punctured, densely fulvo-pubescent surface of this beautiful *Aleochara*, combined with the suffused, red, oblique dash on each of its elytra, and the paleness of its legs, as well as of the base and apex of its antennæ, will at once distinguish it. It is probably universal throughout the archipelago, though I have myself observed it only in Lanzarote, Fuerteventura, Grand Canary, and Teneriffe, but it was captured in Gomera both by Mr Gray and Dr Crotch (the former of whom found it likewise in Fuerteventura, and the latter in Teneriffe). My Fuerteventuran specimens were taken from beneath camels' dung in the Rio Palmas, and the Teneriffan ones from the mountains above S<sup>ra</sup> Cruz. It occurs in the south of Europe, and is not uncommon in the Madeiran Group

### 834 *Aleochara crassiuscula*

*Aleochara crassiuscula*, *Sahlb, Ins Fenn* 1 396 (1834)

— —, *fuscipes*?, *Brulle* [nec *Gray*], in *Webb et Berth (Col)* 60 (1838)

— —, *turpis*, *Erich, Gen et Spec Staph* 162 (1839)

— —, *Woll, Ins Mad* 560 (1854)

— —, *Id, Cat Mad Col* 181 (1857)

*Habitat* insulas omnes Canarienses, in stercore bovino et equino vulgaris

The more parallel outline and blacker, less pubescent, and more shining surface of this common European *Aleochara*, in conjunction with its darker limbs and more testaceous elytral dash, will readily separate it from the *puberula*. It is also more variable in stature—ascending to a somewhat larger, and descending to a very much smaller size. It occurs in the dung of cattle (independently of elevation), and is universal throughout the archipelago—in the whole seven islands of which I have myself captured it. In Lanzarote, Gomera, and Palma it was found likewise by Mr Gray, and in Teneriffe and Gomera by Dr Crotch. It abounds at the Madenias. I have little doubt that the species referred to by M. Brullé under the name of "*A. fuscipes*, Grav." was entered in his most inaccurate list on the strength of a large example of this *Aleochara*, for I have no evidence of the *fuscipes* being found in any of these Atlantic Islands, whereas so universal and abundant an insect as the *A. crassiuscula* could scarcely have escaped the observation of even MM. Webb and Bethelot. If such, however, be the case (which, I think, is pretty evident), it is surprising how two species which differ so essentially from each other could possibly have been confounded by M. Brullé.

### 835 *Aleochara littoralis*, n. sp.

*A. nigra*, subopaca, grosse sed vix dense griseo-pubescent, elytris postice suffuse (plus minus evidenter) rufescentibus, capite utrinque grosse punctato, prothorace multo minutius elytrisque minutius et densius punctatis, abdomine nitido, paucissime punctato, antennis pedibusque rufo-testaceis.—Long. corp. lin.  $1\frac{3}{4}$ –2.

*Obs*.—Species *A. grisea* Kraatzii valde affinis, sed minus atra, elytris etiam suffuse rufescentibus, antennis (vix longioribus) pedibusque rufo-testaceis (nec piceis), illarum articulo ultimo obtusiore, nec acuto, capite vix angustiore.

*Habitat* Lanzarotam, in arenosis maritimis sub putridis degens.

In its general contour and sculpture, as well as in the coarse griseous pubescence with which its subopake surface is clothed, this *Aleochara* is intimately related to the European *A. grisea*, of which indeed it is barely possible that it may be but a geographical state. It differs in having its head just perceptibly narrower (or more oval), in its elytra being more suffused with a reddish tint, and in its limbs being paler or more testaceous,—the antennæ being, also, a trifle longer, with their apical joint obtuser, or less pointed. It was taken sparingly by Mr Gray and myself, from beneath a dead

hen, on the sandy beach close to Arrecife in Lanzarote, and subsequently, by myself, in a similar situation, at Berrugo, in the extreme south of that island

### 836 *Aleochara funebris*, n. sp.

*A. nitida*, grosse et longe subfulvescenti-pubescent, capite prothoraceque sat grosse sed haud profunde punctatis, elytris densius punctatis, antennis nigrescentibus, ad basin pedibusque rufo-ferugineis—Long corp. lin 2-2½

*Obs*—Affinis *A. mæsta* Grav., sed paulo major, fortius (præsertim in capite prothoraceque) punctata, prothorace angustiore (minus transverso), antennis ad basin pedibusque sensim pallidioribus

*Habitat* in Teneriffa, Gomera et Palma, rarior

In its pubescent, shining, intensely black surface and ferruginous legs the present *Aleochara* very closely resembles the European *A. mæsta*, and, although I have not my original specimen now for comparison, I suspect that it is probably conspecific with the insect which I actually referred to the *mæsta* in my Madeiran Catalogue. At any rate the four Canarian examples now before me (one of which I captured at Taganana in Teneriffe, and another in the Barranco de Galga of Palma, whilst the remaining two were found by Dr. Crotch in Gomera) differ from the *mæsta* in being (particularly on the head and prothorax) rather more strongly punctured, in their prothorax being perceptibly narrower or less transverse, and in their legs and the base of their antennæ being a little paler. The species would seem, also, to ascend to a somewhat larger stature.

### 837 *Aleochara nitida*.

*Aleochara nitida*, Grav., *Col. Micropt.* 97 (1802)

— — —, *Erich.*, *Gen. et Spec. Staph.* 168 (1839)

— — —, *Woll.*, *Ins. Mad.* 560 (1854)

— — —, *Id.*, *Cat. Mad. Col.* 182 (1857)

*Habitat* insulas omnes Canarienses, in stercore necnon in humidis, ab orâ maritimâ usque ad 9000' s. m. ascendens

The common European *A. nitida*, which is universal in the Madeiran Group, is equally universal at the Canaries—I having myself captured it in the whole seven islands. In Lanzarote, Fuerteventura, Palma, and Hierro it was found likewise by Mr. Gray, and in Teneriffe and Gomera by Dr. Crotch. It occurs not merely in dung but in moist places generally—from the sea-level to an altitude of at least 9000 feet (at which elevation I have taken it in Teneriffe, on the Cumbre overlooking the Cañadas).

838 *Aleochara binotata*

*Aleochara binotata*, Kriatz, *Nat der Ins Deutsch* 11 106 (1856)  
 ———, *Woll, Cat Mad Col* 182 (1857)

*Habitat* in Lanzarota, Fuerteventura, Canaria et Gomera, und cum specie præcedente degens

I am not at all satisfied that the *A. binotata* of Kriatz is truly distinct from the *nitida*, for although it is not difficult to identify extreme specimens of each, it is occasionally next to impossible to assign the intermediate ones, with any certainty, to their supposed types, and, indeed, I am far from convinced that some of my examples are not completely osculant between the two. Nevertheless, since some of their characters may perhaps have escaped me, and there can be no question that normal individuals are easily separable, I will not venture to amalgamate the species. Typically the *A. binotata* may be defined as, on the average, smaller than the *nitida* (though both do occasionally descend to a very minute stature), with its punctation just appreciably stronger, its rufescent elytral spot larger and *more suffused*, and its antennæ shorter (though the last feature is a somewhat deceptive one on account of the slight difference in length exhibited by the *series* of both insects). The fact, too, of their being nearly always found in company would not militate against the supposition that they are but states assumed by a single species. I have taken the *A. binotata* in Lanzarote, Fuerteventura, Grand Canary, and Gomera (in the last of which it was found likewise by Dr Crotch), but the specimens from Lanzarote and Fuerteventura are, I think, the most typical ones. It occurs in Porto Santo of the Madeiran Group.

839 *Aleochara morion*.

*Aleochara morion*, Grav, *Col Micropt* 97 (1802)  
 ———, *Erich, Gen et Spec Staph* 175 (1839)  
 ———, *Woll, Ins Mad* 561 (1854)  
 ———, *Id Cat Mad Col* 183 (1857)

*Habitat* Teneriffa, Gomeiam et Palmam, minus frequens

The minute size, fusiform outline, and dark, concolorous, very slightly shining surface of this common European *Aleochara* will sufficiently distinguish it. As at Madena, it occurs sparingly in these islands—where most probably it is universal. Hitherto, however, I have observed it only at the Agua Mansa and Las Mercedes of Teneriffe, and in Palma, but three examples are now before me which were captured in Gomera by Dr Crotch (who likewise met with it in Teneriffe).

## Genus 308 OLIGOTA.

Mannheim, *Brachel* 72 (1831)840 *Oligota castanea*, n sp

*O* linearis, rufo- vel fusco-castanea, elytris abdominisque apice fere rufo-testaceis, abdomine ad basin nigrescentiore, antennis ad basin pedibusque rufo-testaceis, illarum articulis 4 vel 5 ultimis sensim crassioribus — Long corp lin vix  $\frac{3}{4}$

*Habitat* in sylvaticis Teneriffæ, Gomeræ et Palmæ, sub foliis dejectis, rarior

The rather large size, for an *Oligota*, of this (nevertheless minute) insect, combined with its reddish-castaneous hue (the elytra and apex of the abdomen being, however, generally of a more or less clear rufo-testaceous), its pale limbs, and the four or five apical joints of its antennæ being perceptibly incrassated, will sufficiently distinguish it. It appears to occur at intermediate elevations, principally within the sylvan districts, where, however, it is rare. I have taken it, from beneath fallen leaves, at the Agua Garcia, Taganana, Las Mercedes, and on the mountains above S<sup>a</sup> Cruz, in Teneriffe, as well as in the Barranco de Galga of Palma, and a single specimen is now before me which was captured by Dr Crotch in Gomera (I believe, above Heimigua)

841 *Oligota inflata*.

*O* minor, linearis, fusco- vel nigro-picea, abdomine nigro ad apicem vix dilutiore, antennis brevioribus, ad basin pedibusque testaceo-piceis, illarum articulis 4 ultimis sensim crassioribus — Long corp lin vix  $\frac{2}{3}$

*Microcera inflata*, *Mann*, *Brachel* 72 (1831)

*Oligota subtilis*, *Erich*, *Gen et Spec Staph* 180 (1839)

— *inflata*, *Woll*, *Ins Mad* 562 (1854)

— —, *Id*, *Cat Mad Col* 184 (1857)

*Habitat* Lanzarotam, Teneriffam et Gomeram, sub quisquiliis folisque dejectis hinc inde haud infrequens

I think that the brownish-piceous hue and the distinctly quadricarticulate antennal club of this diminutive *Olygota*, combined with the shape of its prothorax (which is appreciably narrower before than behind, with the posterior angles tolerably expressed), will assign it to the European *O inflata*, rather than to the *pusillima*. It occurs beneath vegetable detritus at low and intermediate elevations. I have captured it abundantly, from under the refuse around the base of corn-stacks, at Hara in the north of Lanzarote, and more sparingly above the Puerto Orotava in Teneriffe, and a single

example, taken by himself in Gomera, has been communicated by Dr Crotch. It is found likewise in Madena.

(Subfam II TACHYPORIDES)

Genus 309 CONOSOMA

Kiaatz, *Nat der Ins Deutsch* ii 431 (1856)

842 *Conosoma pubescens*.

*Staphylinus pubescens*, Payk., *Mon Carab App* 138 (1790)

*Conurus pubescens*, Erich., *Gen et Spec Staph* 221 (1839)

———, Woll., *Ins Mad* 565 (1854)

*Conosoma pubescens*, Kiaatz, *Nat der Ins Deutsch* ii 435 (1856)

*Conurus pubescens*, Woll., *Cat Mad Col* 184 (1857)

*Habitat* Palmam, Junio incunte a d 1858 specimina sex sub cortice arboris cujusdam laxo in montibus supra Sanctam Crucem cepti.

The only Canarian specimens which I have seen of this common European insect (which occurs sparingly at Madena) are six which were captured by myself, at the beginning of June 1858, in the island of Palma—from beneath the loosened bark of an old tree high up in the Barranco above S<sup>ta</sup> Cruz.

843 *Conosoma lividum*

*Conurus lividus*, Erich., *Gen et Spec Staph* 229 (1839)

*Conosoma lividum*, Kiaatz, *Nat der Ins Deutsch* ii 436 (1856)

*Habitat* insulas Canarienses, in Hierro solâ adhuc haud observatum.

In a long array of specimens of this variable insect, now before me, I can detect no character to warrant the suspicion that they are distinct from the European *C lividum*,—though, if anything, their antennæ are perhaps a trifle longer. One or two darker examples might almost pass for the *fuscum* of Erichson, but I cannot perceive in them any difference except that of colour (which is essentially variable in the *C lividum*), and I therefore think it would be unsafe to admit an additional species into the fauna on such evidence. Indeed the paler and darker individuals were taken in company, and I am quite satisfied that they are all of them conspecific. It occurs principally, beneath vegetable refuse, in sylvan and subsylvan spots of intermediate elevations, and there can be little doubt that it is universal throughout the archipelago—Hierro being the only island of the seven in which hitherto it does not happen to have been observed. I have myself captured it in Lanzarote, in the Rio Palmas of Fuerteventura, in the region of El Monte in Grand Canary, at the Agua Mansa and on the mountains above S<sup>ta</sup> Cruz in Teneriffe, as

well as in Palma, and a specimen has been communicated by Dr Crotch, taken in Gomera

### Genus 310 TACHYPORUS

Gravenhorst, *Col Micropt* 124 (1802)

#### 844 *Tachyporus pusillus*

*Tachyporus pusillus*, *Grav, Mon* 9 (1806)

———, *Erich, Gen et Spec Staph* 239 (1839)

——— *celer*, *Woll, Ins Mad* 567 (1854)

———, *Id, Cat Mad Col* 185 (1857)

——— *marginatus*, *Hart [nec Fab], Geolog Verh. Lanz und Fuert* 140

*Habitat* insulas omnes Canarienses, passim

The larger size, broader outline, and darker hue are almost the only characters which appear to distinguish the European *T. pusillus* from the *brunneus*, and yet the two species are easily separated when seen. The *T. pusillus* occurs at low and intermediate elevations, and is universal throughout the Group—in all the islands of which, except Palma, where it was found by Mr Gray. I have myself captured it. In Lanzarote and Hierro it was likewise taken by Mr Gray, and in Teneriffe by Dr Crotch. It abounds in the north of Lanzarote, and is unquestionably the species referred to (by Dr Heer) in M. Hartung's list under the name of "*Tachyporus marginatus*, F." It occurs sparingly at Madena,—my *T. celer* appearing to me, on a closer examination, not to differ from the *pusillus*.

#### 845 *Tachyporus brunneus*

*Oxyporus brunneus*, *Fab, Ent Syst* 111 535 (1792)

*Tachyporus brunneus*, *Erich, Gen et Spec Staph* 241 (1839)

———, *Woll, Ins Mad* 568 (1854)

———, *Id, Cat Mad Col* 185 (1857)

*Habitat* insulas Canarienses, in Fuerteventura solâ hactenus haud detectus

This common European insect, which abounds in the Madeiran Group, is doubtless universal at the Canaries, though hitherto it does not happen to have been observed in Fuerteventura. I have myself captured it in Lanzarote, Grand Canary, Teneriffe, Palma, and Hierro, and it was taken by Dr Crotch in Gomera, and by Mr Gray in Palma.

### Genus 311 HABROCERUS.

Erichson, *Kaf der Mak Br.* 1 400 (1839)

#### 846 *Habrocerus capillaricornis*.

*Tachyporus capillaricornis*, *Grav, Mon* 10 (1806)

*Habrocerus capillaricornis*, *Erich, Gen et Spec Staph* 245 (1839)

*Habiocerus capillanicornis*, *Woll, Ins Mad* 570 (1854)

— —, *Id, Cat Mad Col* 185 (1857)

*Habitat* in Hierro, in regione sylvaticâ "El Golfo" dictâ mense  
Februarii a d 1858 exemplar unum cepi

The *H. capillanicornis*, so widely spread (though by no means common) throughout Europe, and which abounds in the sylvan districts of Madeira, is apparently of the utmost rarity in these islands. Indeed hitherto I have seen but a single Canarian example of it, which was taken by myself (during February 1858) in the wooded region of El Golfo on the western slopes of Hierro

### Genus 312 TRICHOPHYA

Mannenheim, *Brachel* 73 (1831)

#### 847 *Trichophya pilicornis*

*Aleochara pilicornis*, *Gyll, Ins Suec* n 417 (1810)

*Trichophya pilicornis*, *Mann, Brachel* 73 (1831)

*Trichophyus pilicornis*, *Erich, Gen et Spec Staph* 205 (1834)

*Trichophya pilicornis*, *Kratz, Nat der Ins Deutsch* n 390 (1856)

*Habitat* in Teneriffa, Palma et Hierro, in sylvaticis, rarissima

The European *T. pilicornis* is of the greatest rarity at the Canaries, and confined apparently to the sylvan districts of intermediate and rather lofty elevations. The few specimens which I have seen were taken by myself at the Agua Garcia and above Ycod el Alto in Teneriffe, in Palma, and in the wooded region of El Golfo on the western side of Hierro. It is just possible that the Madeiran *T. Huttoni* may be but a large state of the *pilicornis*

### Genus 313 MYCETOPORUS.

Mannenheim, *Brachel* 62 (1831)

#### 848 *Mycetoporus rufus*, n sp

*M. elongato-ellipticus*, capite, prothorace elytrisque clare testaceo-rufis, abdomine (valde profunde punctato) nigro, apice rufescentiore, antennis fuscis, basi, apice ipso pedibusque rufo-testaceis, prothoracis punctis 4 anticis a margine parum remotis, elytrorum seriebus tribus parce sed distincte punctatis — Long corp lin  $2\frac{1}{3}$  — vix 3

*Habitat* in Teneriffa et Gomera, rarissimus

The clear rufous (or testaceo-rufous) hue of the head, prothorax, and elytra of this large and beautiful *Mycetoporus*, the abdomen of which is dark and very coarsely punctured, with the apex more or less rufescent, combined with its four anterior prothoracic punctules being situated at some little distance behind the front margin, will sufficiently distinguish it. It seems to be extremely rare and to

occur at low and intermediate elevations, the few specimens which I have seen having been captured by myself in Teneriffe and Gomera, —namely, near St<sup>a</sup> Cruz, at the Agua Mansa, and between Orotava and Realejo, of the former, and close to San Sebastian of the latter

849 *Mycetoporus monilicornis*, n. sp.

*M. angustus*, parallelo-elongatus, capite (angusto, triangulari, oculis parvis) prothoraceque testaceis, elytris (brevibus) rufo-testaceis, abdomine (sat profunde punctato) rufo-piceo, basi apiceque ruf. pallidior, antennis (elongatis, submoniliformibus) pedibusque testaceis, prothoracis punctis 4 anticis fere ad marginem ipsum sitis, elytrorum seriebus tribus parce et obsolete punctatis —Long corp. lin. 2

*Habitat* in montibus excelsis Teneriffæ, a W. D. Crotch semel captus

At once known from the preceding species by its smaller size and very much narrower and more parallel outline, by the paler or more testaceous hue of its head and prothorax (the former of which is narrower and with the eyes more minute), by its shorter elytra (the three lines on each of which are more obsoletely punctured), by its more piceous and less coarsely punctured abdomen, and by its relatively longer, paler, and more moniliform antennæ. Its four anterior prothoracic punctules, moreover, are placed nearer to the front margin. The only example which I have seen was captured by Dr. Crotch, during the spring of 1862, in Teneriffe—apparently (from the mark appended to it) on the elevated Cumbre adjoining the Cañadas.

850 *Mycetoporus solidicornis*, n. sp.

*M. elongato-ellipticus*, capite nigro, prothorace elytrisq. rufo-testaceis, his circa scutellum neonon in disco suffuse infuscatis, abdomine (sat profunde punctato) piceo-nigro, apice paulo dilutior, antennis brevibus, nigro-fuscis, basi pedibusque testaceis (tribus tarsisque plus minus infuscatis), prothoracis punctis 4 anticis a margine parum remotis, elytrorum seriebus tribus valde distincte punctatis —Long corp. lin. 1½

*Habitat* Canariam Grandem, in regione El Monte repertus

The very much shorter antennæ of this *Mycetoporus*, combined with its black head and rufo-testaceous prothorax and elytra (the latter of which, however, are more or less infuscated, or suffused, about the scutellary region and across their disc), will readily separate it from the two preceding species. Its general appearance is much that of a *Bolitobius*, but the minute aciculated last joint of its maxillary palpi at once assigns it to the present genus. My only two examples I captured in the region of El Monte, in Grand Canary.

Genus 314. **BOLITOBIVS.**(Leach) Stephens, *Ill Brit Ent* v 171 (1832)851 **Bolitobius luridus**, n sp

*B* ellipticus, luido-testaceus, capite utrinque, prothorace in disco, elytris hinc inde (præscitum in disco utroque postico) abdominisque segmentis ad basin plus minus obscure et suffuse infuscato-nubulosis, antennis apicem versus nigrescentibus paulo incrassatis, basi pedibusque testaceis, prothoracis punctis 4 posticis ad marginem sitis, minutis (externis ægre observandis, ad angulum utrumque ipsum positis), elytris amplis, postice substriatis, senicibus tribus paucissimis (sc circa 4-6) punctatis—Long corp ln  $1\frac{2}{3}$ -2

*Habitat* in intermediis sylvaticis Teneriffæ, rarissimus

The elliptic outline and *comparatively* large head and elytra of this *Bolitobius*, in conjunction with its *luid*-testaceous hue (the head on either side, the disc of the pronotum, a considerable portion of the elytra, and the hinder half of each of the abdominal segments being more or less obscurely clouded, or infuscate), will serve to characterize it. The four punctules at the base of its prothorax are extremely minute, and situated quite on the margin itself (the outer pair being very difficult to detect, from being placed exactly at either posterior angle), and its elytra, which are substriated behind, have their three longitudinal lines *most* remotely punctured (the punctures being usually not more than from about four to six in number). It appears to be extremely rare, and confined to the sylvan districts of Teneriffe—the few specimens which I have seen having been taken by myself at the Agua Garcia and in the laurel-woods above Taganana

852 **Bolitobius filicornis**, n sp

*B* elongato-ellipticus, angustus, capite parvo, nigro, prothorace clarescente elytris infuscate rufo-testaceis, abdomine piceo (segmentis basi singulatim rufescentioribus), antennis subfiliformibus, nigro-fuscis, basi pedibusque testaceis, prothoracis punctis 4 posticis vix ad marginem ipsissimum sitis, distinctis, elytris breviusculis, senicibus tribus distincte punctatis

*Variat* (immaturus?) capite, elytris antennisque pallidioribus—Long corp ln  $1\frac{1}{2}$ -vix  $1\frac{1}{3}$

*Habitat* in Canaria, Teneriffa et Hierro, rarissimus

The smaller size, very much narrower and less elliptic outline, and less developed elytra of this species, added to its smaller and blacker head, its rufo-testaceous prothorax and elytra (the former of which is clear and immaculate, whilst the latter are more or less infuscated), its slenderer and more filiform antennæ, the larger size of the four

punctules at the base of its pronotum (which are not situated quite upon the edge itself), and its more numerous punctured three elytral lines, will at once separate it from the *B luridus*. In general colouring, size, and aspect it is scarcely distinguishable, *primâ facie*, from the *Mycetoporus solidicornis*, nevertheless, on a closer inspection, the last joint of its maxillary palpi will show it to be a true *Bolitobius*, and its antennæ are very much longer, more filiform, and less compact. When accurately examined it will be further seen to be altogether a trifle narrower and less elliptic, with its abdomen more piceous (or less black), its limbs a little paler, and its four anterior prothoracic punctules placed considerably nearer to the front margin.

Like the *B luridus*, the present species seems to be very rare, and to be confined to intermediate elevations—occurring, however, in subsylvan as well as sylvan spots. I have taken it in the region of El Monte in Grand Canary, as well as in Hierro, and a single example is now before me which was found by Dr. Crotch in Teneriffe.

### (Subfam. III. QUEDIIDES)

#### Genus 315 EURYPORUS

Erichson, *Kaf. der Malh. Br.* and 1: 493 (1839)

#### 853 *Euryporus princeps*, n. sp.

*E. elongato-ellipticus*, nitidus, capite prothoraceque nitidissimis, leviter (sed haud minute) punctatis, illo ovali nigro, hoc (utrinque in disco biseriatim tripunctato) unâ cum elytris (brevibus, grosse rugoso-punctatis) fusco-piceis, abdomine piceo-fusco, metallicotincto, postice dilutiore, utrinque valde profunde oblongo-punctato, antennis nigrescentibus, ad basin pedibusque piceo-ferrugineis. — Long. corp. lin. 7.

*Habitat* in intermediis Canariæ Grandis sub lapide ad marginem rivuli cujusdam prope oppidum Teror, Aprilis exeunte a. d. 1853, exemplar unicum collegi.

Although the large size and excessively abbreviated, roughly sculptured elytra of this fine Staphylinid might be supposed at first sight to assign it to a genus distinct from (however nearly allied to) *Euryporus*, nevertheless the various details of its structure do not appear to me (when carefully inspected) to present sufficient peculiarities to warrant its isolation. Indeed in most of its essential features—such as the approximation of its intermediate coxæ, its deeply incised upper lip, its filiform maxillary palpi and the securiform last joint of its labial ones, the shape and proportions of its mentum, ligula, and

paraglossæ, and its simple anterior feet\*—it is quite *normal* for *Eurypterus*. Its head is the only part of its body which seems to be quite black,—the prothorax and elytra being of a dark rufo-piceous brown, and the abdomen (which is most deeply punctured on either side and has a rather conspicuous metallic lustre) being still more diluted or ferruginous. The example described from was taken by myself, during April 1858, from beneath a wet stone at the edge of the little stream at Teror in Grand Canary.

### Genus 316 HETEROTHOPS

(Kny) Steph., *Ill Brit Ent* v 256 (1832)

#### 854 *Heterothops minutus*.

*H. niger* elytris abdominisque apice plus minus dilutionibus, capite prothoraceque angustulis, nitidissimis, elytris abdomineque pubescentibus, illis vel nigro-piceis apice et ad humeros dilutionibus, vel testaceo-piceis, vel etiam fere fusco-testaceis, antennis gracilibus, ad basin pedibusque piceo-testaceis.

*Variat* etiam prothorace dilutiore, antennis pedibusque omnino pallidis.—Long corp. ln  $1\frac{3}{4}$ – $2\frac{1}{2}$

*Heterothops minutus*, Woll., *Ann Nat Hist* vi 53 (1860)

*Habitat* insulas omnes Canarienses, sub quibuslibet haud infrequens

This insect, which occurs beneath vegetable refuse around Funchal in Madeira, is universal at the Canaries—in all the islands of which except Gomera and Palma, where it was found by Dr. Clotch, I have myself captured it. My Lanzarotan specimens are principally from under the refuse around the base of corn-stacks at Hania, the Fuerteventuran ones from the Rio Palmas, the Grand-Canarian ones from the region of El Monte, the Teneriffan ones from the mountains above Sta Cruz, as well as from Las Mercedes, La Esperanza, Souval, and the Agua Garcia, and the Hierro ones from near Valverde. It is somewhat allied, at first sight, to the European *H. dissimilis*, but, apart from *colour* (which in both species is essentially variable), its head and prothorax are relatively a little narrower than is the case in that insect (the former being more oblong, and the latter more laterally compressed in front, and with the discal punctures more evident), its elytra are a trifle longer, and its antennæ are somewhat longer, slenderer, more filiform, and more fragile—the joints being more loosely attached, and the apical one less abbreviated.

\* The specimen before me is a *female* one, nevertheless, since the dilatation of the front tarsi in the immediately allied groups is not usually a sexual character (though frequently a little more expressed in the males), it is probable that the anterior feet of both sexes will be found to be simple.

Genus 317 **QUEDIUS**(Leach) Steph, *III Brit Ent* v 215 (1832)§ I *Oculi minores Antennæ pedesque robusti, tarsi antici latissime dilatatis*855 **Quedius angustifrons**, n sp

*Q* capite (angusto) prothoraceque nigris, subnitidis, elytris abdomineque pubescentibus, illis brevibus subruguloso-punctatis rufopiceis, hoc nigro-piceo postice paulo dilutiore, profunde sed parce punctato, antennis (articulo ultimo oblique subtriuncato) fuscis ad basin pedibusque piceo-testaceis — Long corp lin 5

*Habitat* in intermediis Canariæ et Gomeræ, rarissimus

The less highly polished head and prothorax (the former of which is narrow and oval, with the eyes not at all prominent), in conjunction with its relatively shorter and more rufescent elytra, will at once distinguish this *Quedius* from the two following ones. It is apparently extremely rare, and confined to damp spots (particularly sylvan and subsylvan ones) of intermediate elevations. I have captured it, beneath wet moss, near Teirol in Grand Canary, and a single example was taken by Dr Crotch (I believe, above Hermigua) in Gomera.

856 **Quedius fulgidus**

*Q* ater, interdum elytris abdominisque apice picescentioribus, capite (crasso) prothoraceque pernitidis, elytris subconvexis, sat parce subruguloso-punctatis, abdomine dense subasperato-punctulato, antennis (articulo ultimo acuminato-ovato) pedibusque valde incrassatis, nigro-piceis, illis basi nigro-variegatis — Long corp lin 4-5½

*Staphylinus fulgidus*, *Fab, Mant Ins* i 220 (1787)

—— *variabilis*, *Gyll, Ins Suec* ii 303 (1810)

*Quedius fulgidus*, *Erich, Gen et Spec Staph* 525 (1839)

——, *Kraatz, Nat der Ins Deutsch* ii 492 (1856)

*Habitat* in intermediis Teneriffæ et Gomeræ, rarissimus

I can see nothing in the Canarian examples of this insect to warrant the suspicion that they are distinct from the common European *Q. fulgidus*. The species may immediately be known from the other *Quedii* here enumerated by its larger size, more robust form, and blacker hue, by its more sparingly punctured elytra (which vary from intense black to rufopiceous), and by its very much thicker limbs. Like the *Q. angustifrons*, it is decidedly rare in these islands. I have taken it at Las Mercedes in Teneriffe, and it was captured in both Teneriffe and Gomera by Dr Crotch.

§ II *Oculi marini, prominentes Antennae pedesque graciliores, tarsi antici multo minus dilatatis* (Raphirus, Steph)

857 **Quedius megalops**, n sp

♂ capite (subrotundato) prothoraceque nigris, pernitidis, elytris abdomineque pubescentibus, illis dense subreticulato-punctulatis fusco- vel etiam subtestaceo-piceis, hoc piceo-nigro postice paulo dilutiore, dense subasperato-punctato, antennis (articulo ultimo ad apicem oblique truncato) nigro-fuscis, ad basin pedibusque piceo-testaceis — Long corp lin 4

*Habitat* in Canaria, Teneriffa, Palma et Hierro, parum rarus

The smaller bulk of this species, combined with its enormous and rather prominent eyes (which cause the head to appear considerably rounded), its slenderer limbs, browner and more minutely sculptured elytra, and its very much less expanded anterior feet, will readily characterize it. It is widely, but sparingly, distributed over the archipelago, occurring beneath vegetable refuse in sylvan and subsylvan spots at intermediate altitudes. I have taken it in the region of El Monte in Grand Canary, in Palma, and in the wooded district of El Golfo on the western flanks of Hierro, and a Teneriffan and Palman specimen are now before me which were captured by Dr Crotch

(Subfam IV STAPHYLINIDES)

Genus 318 **CREOPHILUS**

(Knyby) Steph, *Ill Brit Ent* v 202 (1832)

858 **Creophilus maxillosus**

Staphylinus maxillosus, *Linn, Syst Nat* 421 (1758)

Creophilus maxillosus, Steph, *Ill Brit Ent* v 202 (1832)

Staphylinus maxillosus, Brulle, in Webb et Berth (Col) 60 (1838)

———, *Will, Ins Mad* 579 (1854)

———, *Id, Cat Mad Col* 188 (1857)

*Habitat* in Fuerteventura, Teneriffa et Gomera, passim

This common European insect, which occurs also in Madeira and Porto Santo, is found occasionally in these islands (principally at low elevations and near the towns), where it has very likely been naturalized from more northern latitudes. I have taken it in Fuerteventura, Teneriffe, and Gomera, and in Teneriffe it was likewise found by Dr Crotch

Genus 319 **OCYPUS**.

(Knyby) Steph, *Ill Brit Ent* v 211 (1832)

859 **Ocypus olens**.

Staphylinus olens, *Mull, Faun Fridr* 23 (1767)

———, Brulle, in Webb et Berth (Col) 59 (1838)

*Ocypus olens*, *Erich*, *Gen et Spec Staph* 405 (1839)

———, *Ki uatz*, *Nat der Ins Deutsch* 11 553 (1856)

*Habitat* in insulis omnibus Canariensibus, sat vulgaris

Although absent from the Madeiran Group, it is somewhat remarkable that the common European *O olens* should be *universal* at the Canaries—in all the islands of which except Gomera, where it was found by Dr Crotch, I have myself taken it. From Fuerteventura it has been communicated, likewise, by the Barão do Castello de Paiva, and in Teneriffe it was captured by M Haitung. I have a single Teneriffan example which I met with in the wood at Las Mercedes, which has its entire pubescence of a yellowish (or golden) tint, but I can detect no other difference to warrant the supposition that it is more than an accidental variety.

### 860 *Ocypus brachypterus*

*O* piceo- vel fusco-niger (interdum in elytris et versus abdominis apicem paulo dilutior), subopacus, dense pubescens, ubique creberrime punctatis, capite (præsertim in maribus) magno, rotundato, lineâ mediâ lævi, prothorace subquadrato (nec transverso), distinctius lineato-subcarinato, elytris brevissimis, ad angulos externos posticos late oblique truncatis, antennis pedibusque rufopiceis et (præsertim his) fulvo-pubescentibus—Long corp lnn 10-14

*Staphylinus brachypterus*, *Brullé*, in *Webb et Berth* (Col) 59 (1838)

*Habitat* in sylvaticis editioribus Teneriffæ, rarior

The less black (or more piceous) hue and usually rather larger and less convex head of this *Ocypus*, combined with its less decidedly opaque and not quite so closely punctured surface, its longer and more keeled prothorax, its very much shorter elytra (which have their outer posterior angle more broadly truncated obliquely), and its paler or more rufescent limbs, which are densely clothed with a bright fulvous pubescence, will readily separate it from the *O olens*. It is totally distinct from the European species which has been referred to the *brachypterus* of Brullé, but the mistake probably arose from M Brullé having himself (erroneously) stated that the Teneriffan insect was also found in Europe—"Cet insecte, qui ne nous paraît pas encore avoir été distingué de l'*olens*, se trouve aussi dans quelques parties de l'Europe"

The *O brachypterus* is extremely rare, or at any rate local, and confined to the damp sylvan districts of Teneriffe, at intermediate and lofty elevations. I have taken it at the Agua Garcia, as well as in the laurel-woods above Taganana, and elsewhere, and it was also met with by M Haitung.

861 *Ocypus affinis*, n sp

*O* præcedenti affinis sed (nisi fallor) verè distinctus, paulo minor, angustior, puncturâ omnino fortiore ac (præsertim in abdomine) pauciore, capite subminore, sensim convexiore, prothoracis lineâ mediâ obscuriore, elytris paulo minus abbreviatis, antennis pedibusque clarioribus, illarum articulis apicalibus subbrevioribus — Long corp ln 9-12

*Habitat* Teneriffam (Dom Hartung) et Palmam, in locis similibus ac præcedens.

Although closely allied to the *brachypterus*, I do not think it possible that this *Ocypus* can be any modification of that species. So far as I have myself observed, it is confined to the sylvan districts of Palma, as the *brachypterus* is to those of Teneriffe, nevertheless, of two examples which were communicated by Dr Heer as *Teneriffan*, and which were taken by M Hartung, one pertains to the *brachypterus* and the other to the *affinis*. As it is certain, however, that many of M Hartung's specimens from the various islands became afterwards accidentally mixed up, its Teneriffan *habitat* requires further corroboration. It is altogether a little smaller and narrower than the *brachypterus*, and its punctation is both stronger and (particularly on the abdomen) less dense, its head is a trifle less developed and more convex, its central prothoracic line is less conspicuous, its elytra are not quite so abbreviated, and its limbs are of a clearer hue, with the apical and subapical joints of the antennæ perhaps a little shorter. My specimens (from the intermediate districts of Palma) were captured high up in the Barranco de Galga and in the Barranco above S<sup>ta</sup> Cruz.

862 *Ocypus umbricola*, n sp

*O* colore et sculpturâ *O brachyptero* fere similis, sed multo minor angustior, capite prothoraceque obsoletissime submetallico-tinctis, illo minore subovali (nec rotundato), elytris paulo minus abbreviatis necnon ad angulos externos posticos minus oblique truncatis, antennis pedibusque parcius fulvo-pilosis — Long corp ln 6-8

*Habitat* in humidis sylvaticis Teneriffæ, rarissimus

In its dense and fine punctation and general hue, this *Ocypus* is nearly similar to the *brachypterus*, but it is *very* much smaller and narrower, and its head and prothorax have often a slight metallic tinge, its head is also *relatively* smaller and less rounded, its elytra are not quite so shortened, nor so much truncated obliquely at their hinder external angles, and its limbs are more sparingly pilose. I have detected it hitherto only in the damp sylvan regions of Teneriffe, where, moreover, it is extremely scarce. I have taken it sparingly

on the densely-clad mountains towards Taganana, as well as at the Agua Garcia, the Agua Mansa, and above Ycod el Alto, and an example (also Teneriffan) has been communicated by the Barão do Castello de Paiva.

### 863 *Ocypus curtipennis*, n sp

*O niger* vel piceo-niger (sæpius in elytris et versus abdominis apicem paulo dilutior), nitidus, capite prothoraceque plus minus æneotinctis, sat profunde punctatis, parce pubescentibus, illo parum magno subrotundato convexo, hâc obsolete lineato-subcarinato, elytris brevibus, densius pubescentibus ac densissime levius punctulatis, antennis pedibusque piceo-ferrugineis et (præsertim his) fulvo-pubescentibus —Long corp lin  $6\frac{1}{2}$ —9

*Habitat* in sylvaticis subsylvaticisque Canariæ Grandis, passim

The short and usually picescent elytra of this *Ocypus*, added to its shining, somewhat coarsely punctured, subænescent, and very sparingly pilose head and prothorax (the former of which is rather large, round, and convex), will distinguish it from the other species here enumerated. Hitherto I have observed it only in Grand Canary, where it is widely spread over the sylvan and subsylvan districts of intermediate altitudes. My specimens are principally from the region of El Monte, and from the remains of the old laurel-forest of El Dorames on the mountains between Osonio and Guia.

### 864 *Ocypus atratus*, n sp

*O ater*, nitidus, capite prothoraceque piceo sed dense punctatis punctisque minutis interjectis parce irroratis, subcalvis, illo curtulo, mox pone oculos recte truncato, hâc (postice paulo angustato) obsoletissime lineato-subcarinato, elytris minutius densissime punctatis, antennis versus apicem tarsisque dilutioribus, mandibulis intus simplicibus —Long corp lin  $6\frac{1}{2}$ —8

*Habitat* Lanzarotam et Fuerteventuram, hinc inde sub lapidibus

In its rather large size, somewhat deeply but sparingly punctured shining head and prothorax, and intensely black hue, this *Ocypus* has much the *primâ facie* appearance of the European *O ater*, nevertheless its mandibles are *simple* internally, and its head is shorter (or more straightly, and suddenly, truncated behind the eyes). Its prothorax, also, is a trifle longer, with the posterior angles less completely rounded off. It has been observed hitherto only in Lanzarote and Fuerteventura—in the former of which it was taken by Mr Gray, and in the latter by M Hartung and (near Oliva) by myself.

### 865 *Ocypus subænescens*, n sp

*O sequenti similis*, sed plerumque vix major, obscurior (minus æneus)

et pube sæpius minus fulvescente vestitus, capite (submajore) prothoraceque parcius ac profundius punctatis, abdomine minus distincte lineato-pubescente, antennis vix robustioribus — Long corp lin 7-8½

*Staphylinus fuscatus*?, Brulle [nec Grav], in Webb et Berth (Col) 60 (1838)

*Habitat* in CANARIA, Teneriffa et Hierro, ab orâ maritimâ versus 6000' s m ascendens

Whilst the following species is found in Lanzarote and Fuerteventura, the present one would seem to represent it in the other islands of the archipelago—where it will doubtless be found to be universal. Hitherto, however, I have detected it only in Grand Canary, Teneriffe, and Hierro, in the first of which it was found likewise by Mr Gray. It is very closely allied to the *O. punctatissimus*, but (I believe) no local phasis of it, and, indeed, the fact of its occurring in at any rate *three* distinct islands without any appreciable change would tend to imply this. It was examined by Dr Kraatz, and returned by him as "*Ocypus*, n sp". It seems to differ from the Lanzarotan and Fuerteventuran species, principally, in being on the average a trifle larger and less brassy, and in having the punctation of its head and prothorax both coarser and less dense. Its entire pubescence, likewise, is a little less fulvous, and less condensed on the abdomen into broken-up lines, and its head and antennæ are just perceptibly more robust. It seems to be almost independent of elevation, for in Teneriffe I have captured it from nearly the sea-level, at Sta Cruz and around the Puerto Orotava, to an altitude of about 6000 feet above the sea (on the ascent to the Cumbre above the Agua Mansa).

I have little doubt that it is the species referred in M. Brullé's list to the *fuscatus*, Grav, which in size and general contour it much resembles, nevertheless, in its *ænescent* and much more densely punctured head, prothorax, and elytra, as well as in its differently sculptured abdomen and paler limbs, it is altogether distinct from that insect.

#### 866 *Ocypus punctatissimus*, n sp

*O. fulvo-pubescent*, capite prothoraceque nitidulus, densissime et minute punctulatis punctisque perpaucis magnis irroratis, æneis, elytris fusco-piceis, obscurius æneo-tinctis, abdomine nigro, lineis fulvis fractis (plus minus obsoletis) ornato punctisque permagnis paucis irrorato, antennis pedibusque rufo-piceis, hinc inde nigrescentioribus, tarsis anticis rufo-testaceis — Long corp lin 6-8

*Habitat* Lanzarotam et Fuerteventuram, sub lapidibus, passim

In its æneous head and prothorax, æneo-fuscous elytra, and general

contour this *Ocypus* very closely resembles the common European *O cupreus*, and it is not impossible that it may be but a geographical phasis of that species\* Indeed I cannot detect any appreciable difference between the two, except that the head and prothorax of the Canarian insect are more densely and minutely punctulated and its elytra a trifle more developed It is universal (though not very abundant) throughout Lanzarote and Fuerteventura, in the former of which islands it was found likewise by Mr Gray

### Genus 320 PHILONTHUS.

(Leach) Steph, *Ill Brit Ent* v 226 (1832)

#### § I *Prothoracis seriebus dorsalibus e punctis 4 compositis*

#### 867 *Philonthus umbratilis*

*P niger*, elytris æneo-tinctis, crebre subtiliter punctatis, dense fulvo-cineo-pubescentibus, capite lato, subrotundato, antennis elongatis, fusco-nigris, ad basin piceis, pedibus picescenti-testaceis — Long corp lin  $3\frac{1}{2}$

*Staphylinus umbratilis*, Grav, *Col Micropt* 170 (1802)

*Philonthus umbratilis*, Erich, *Gen et Spec Staph* 445 (1839)

— —, Woll, *Ins Mad* 581 (1854)

— —, Id, *Cat Mad Col* 189 (1857)

*Habitat* Teneriffam, rarissime in “Barranco Santo” juxta Sanctam Crucem exemplar unum sub lapide aquoso collegi

A single Canarian specimen of this European *Philonthus* (which occurs sparingly at Madeira) has hitherto come beneath my notice—taken by myself in the Barranco Santo, near S<sup>ta</sup> Cruz, of Teneriffe Its rather large, rounded head and elongate antennæ, combined with the four punctures of its prothoracic dorsal series, its slightly æneous, closely punctured, densely pubescent elytra, and piceo-testaceous legs, will sufficiently distinguish the species

#### 868 *Philonthus sordidus*

*P niger*, obsolete subæneo-tinctus, elytris lætius ænescentibus, parvissime profunde punctatis, parce sed grosse fulvo-pubescentibus, capite rotundato-ovali, punctis 4 frontalibus inter se subæqualiter distantibus, antennis piceo-nigris, pedibus piceis — Long corp lin  $2\frac{1}{2}$ —3

*Staphylinus sordidus*, Grav, *Col Micropt* 176 (1802)

*Philonthus sordidus*, Erich, *Gen et Spec Staph* 456 (1839)

— —, Woll, *Ins Mad* 582 (1854)

— —, Id, *Cat Mad Col* 189 (1857)

*Habitat* Lanzarotam, Fuerteventuram, Teneriffam et Palmam, sub quousquilis, passim

\* Dr Knaatz, who examined it for me, returned it as “*Ocypus, cupreo affinis*”

This *Philonthus* is certainly identical with the *P. sordidus* of the 'Ins Mad,' and also with the European species of that name. In addition to the four punctures of its prothoracic series (in which it agrees with the *umbellatus*), it may be known by its rather distinctly ænescent and very deeply and remotely punctured elytra (on which the fulvous pile is coarse and distant), by its (suboval) head having the four frontal punctures almost *equidistant* from each other, and by its dark antennæ and piceous legs. It is widely, but sparingly, distributed over the archipelago, where it will probably be found to be universal. I have taken it in Lanzarote, Fuerteventura, Teneriffe, and Palma, in the last of which islands it was found also by Mr Gray, and in Teneriffe by Dr Crotch.

### 869 *Philonthus xantholoma*.

*Staphylinus xantholoma*, Grav, *Mon* 41 (1806)

*Cafius xantholoma*, Steph, *Ill Brit Ent* v 246 (1832)

*Philonthus xantholoma*, Erich, *Gen et Spec Staph* 452 (1839)

— —, Kraatz, *Nat der Ins Deutsch* ii 594 (1856)

*Habitat* Lanzarotam, Fuerteventuram et Canariam, per oras arenosas maritimas sub fucis et rejectamentis degens

The common European *P. xantholoma*, which I have captured sparingly (from beneath sea-weed) on the sandy shores of Lanzarote, Fuerteventura, and Grand Canary, may be known by its rather large, subquadrate head (which is very deeply punctured on either side behind, and has the eyes somewhat prominent), by its opaque, flattened, most densely and minutely punctulated, thickly pubescent elytra (which are often of a more or less brownish-piceous hue, and have their inflected margin testaceous yellow), by its piceo-testaceous legs, and by its prothorax (which is slightly narrowed posteriorly, and obliquely straightened at the sides) having *three* of its four dorsal punctures extremely large and subapproximated, whilst the fourth one is remote and placed close to the anterior margin.

### § II *Prothoracis seriebus dorsalibus e punctis 5 compositis*

### 870 *Philonthus bipustulatus*

*Staphylinus bipustulatus*, Puz, *Fna Ins Germ* 27 10 (1795)

*Philonthus bipustulatus*, Erich, *Gen et Spec Staph* 468 (1839)

— —, Woll, *Ins Mad* 583 (1854)

— —, Id, *Cat Mad Col* 189 (1857)

*Habitat* insulas omnes Canarienses, in stercore vulgaris

The rather larger size of this common European *Philonthus* (which abounds in the Maderan Group), combined with its slightly more developed, less convex, more finely and closely punctured, and blacker

elytra (which have a reddish patch, seldom *altogether* obsolete, towards the inner hinder angle of each), will at once distinguish it from the *P. marcidus*. It is universal throughout the archipelago, occurring in the dung of cattle at most elevations. I have taken it in all the islands except Fuerteventura and Gomera—in the former of which, however, it was found by Mr Gray (who likewise met with it in Palma), and in the latter by Dr Crotch.

### 871 *Philonthus scybalarius*

- Philonthus scybalarius*, *Noim*, *Symbol* 94 (1838)  
 ——— *varians*, var *b*, *Erich*, *Gen et Spec Staph* 470 (1839)  
 ———, *Woll*, *Ins Mad* 583 (1854)  
 ——— *scybalarius*, *Kraatz*, *Nat der Ins Deutsch* 11 601 (1856)  
 ———, *Woll*, *Cat Mad Col* 189 (1857)

*Habitat* insulas Canarienses, in Fuerteventura et Canaria solis hactenus haud observatus

It is extremely difficult to regard this *Philonthus* as more than a state of the *bipustulatus* in which the elytral spot is altogether absent, nevertheless, as Dr Kraatz has upheld it as a distinct species, I will not do otherwise than treat it as such. Apart from its elytra being entirely black (which is sometimes the case, also, in undoubted examples of the *bipustulatus*), it may be defined as being, *on the average*, a trifle smaller, with its head just perceptibly less developed, and with its anterior coxæ and the inner surfaces of all its femora more or less obscurely diluted in hue, or subtestaceous\*. But whether truly distinct or not from the *bipustulatus*, there can be little doubt that it is equally universal throughout the Canarian archipelago—though as yet it does not happen to have been observed in either Fuerteventura or Grand Canary. In Lanzarote, Palma, and Hierro, however, I have myself captured it, whilst in Teneriffe and Gomera it was found by Dr Crotch. Like the *bipustulatus*, it is tolerably common in the Madeiran Group.

### 872 *Philonthus marcidus*, n. sp.

*P. niger*, elytris obscure æneo- vel viridiæneo-tinctis, parce et sat profunde punctatis, parce sed grosse griseo-pubescentibus, brevibus, subconvexis, capite rotundato-ovali, antennis pedibusque nigropiceis, interdum paulo dilutionibus.

*Variat* (rarius) elytris, præsertim postice, suffuse rufescentioribus —

Long corp. lin  $2\frac{1}{2}$ – $3\frac{1}{2}$

*Obs* — *P. scybalario* affinis, sed paulo nitidior, elytris subconvexi-

\* I consider it is a mere *tendency* of the anterior coxæ and femora to become a little diluted in hue, for such, as a *character*, does not obtain universally. And I may further add that even the less development of the head seems to me to be by no means constant.

oribus, sensim æneo- vel viridiæneo-tinctis ac profundius patiusque punctatis, paulo minus dense sed subgrossius pubescentibus, capite vix majore, rotundatiore, antennis paulo brevioribus subrobustioribus (articulus intermedius sensim brevioribus, magis transversis, apicali vix crassiore, subquadrato apice oblique acuminato), pedibus piccis (coxis concoloribus)

*Staphylinus politus*?, Brulle [nec Grav], in Webb et Berth (Col) 60 (1838)

*Habitat* insulas omnes Canarienses, sub quisquiliis (præsertim sub foliis *Opuntie Tunce* putridis) vulgaris,—ab orâ maritimâ usque ad 9000' s m ascendens

This *Philonthus* is universal throughout the archipelago, in the whole seven islands of which I have myself captured it. It occurs beneath vegetable detritus generally, and is very partial to the rotten, putrid leaves of the fleshy *Opuntia Tuna* (or "Prickly Pear")—in places where they have been thrown away as refuse, and allowed to rot, under which circumstances I have taken it around Hania in the north of Lanzarote, near S<sup>ta</sup> Cruz of Teneriffe, in the Banda of Palma, and elsewhere. It seems to be independent of elevation, for in Teneriffe I have met with it from almost the sea-level (near S<sup>ta</sup> Cruz and the Puerto Orotava), through the sylvan and subsylvan districts (above Taganana, at La Esperanza, Souzal, and the Agua Mansa), to an altitude of at least 9000 feet (on the Cumbre overlooking the Cañadas). In Lanzarote, Fuerteventura, Teneriffe, and Hierro it was found likewise by Mr Gray, in Teneriffe and Gomera by Dr Crotch, and in Teneriffe by M Hartung\*. As so abundant an insect could scarcely have escaped the observations of even MM Webb and Berthelot, and since so large a proportion of the very few species which they collected were afterwards wrongly identified by M Brullé, I have little doubt that the "*Staphylinus politus*, Grav" of his list was inserted from a large example (or examples) of this *Philonthus*. Nevertheless from the true *P politus* it is altogether distinct—not merely in the five punctures of its prothoracic series, but likewise in colour, bulk, sculpture, and entire contour.

From its dark hue and general size, the *P marcidus* might at first sight be mistaken for the *scybalarius*, but when closely inspected it will be seen to be a little more shining, particularly on the elytra—which have a slightly brassy or greenish-brassy tinge, and are somewhat more convex and less densely (though very coarsely) pubescent,

\* I have received some Teneriffan specimens of M Hartung's, from Dr Heer, under the name of "*P varians*, Payk"—from which species, however, it is totally distinct.

as well as more deeply and remotely punctured, its head is a trifle larger and rounder, with the antennæ just perceptibly shorter and more robust (the intermediate joints being appreciably more abbreviated, and the terminal one, which is squarish but obliquely acuminate at the tip, perhaps a little thicker), and its coxæ do not appear to be diluted in hue

### 873 *Philonthus proximus*

*P. niger*, prothorace elytrisque (præsertim his) paulo picescentioribus, his subconvexis, sat profunde parceque punctatis et grosse griseo-pubescentibus, capite subrotundato-ovali, antennis fuscis, ad basin pedibusque piceo-testaceis

*Variat* (arius) antennis pedibusque paulo obscurioribus — Long corp  
lin  $2\frac{1}{3}$ —3

*Philonthus proximus*, *Woll, Cat Mad Col* 189 (1857)

*Habitat* in Teneriffa et Gomera, rarior

Readily known from the *marcidus* by its rather smaller size and more piceous hue—even the prothorax being obscurely pitchy, whilst the elytra (which are deeply punctured and convex, and almost, or entirely, free from any metallic tinge) are often very appreciably so—and by its paler limbs (the apical joint of the antennæ being moreover less incrassated) It occurs sparingly at Madeira, and appears to be about equally rare at the Canaries Indeed I have myself taken it only in Teneriffe, but it was found by Dr Crotch both in that island and Gomera\*

### 874 *Philonthus discoideus*.

*Staphylinus discoideus*, *Gray, Col Micropt* 38 (1802)

*Philonthus discoideus*, *Erich, Gen et Spec Staph* 474 (1839)

— —, *Kraatz, Nat der Ins Deutsch* 11 605 (1856)

— —, *Woll, Cat Mad Col* 190 (1857)

*Habitat* in Lanzarota, Fuerteventura et Teneriffa, passim

The common European *P. discoideus*, which occurs sparingly in Madeira, is probably universal in these islands It was taken by Mr Gray in Lanzarote, by myself (from beneath camels' dung) in the Rio Palmas of Fuerteventura, and by Dr Crotch in Teneriffe It may be easily recognized by its rather small size, but somewhat large, roundish-quadrated head and thick neck, by its picescent, distinctly punctured elytra (which are clothed with a fulvous pile, and have their margins, particularly down the suture, more or less conspicuously rufo-ferruginous), and by its piceo-testaceous limbs†

\* I may add that I transmitted the *P. proximus* to Berlin, in 1857, for the inspection of Dr Kraatz (who had then just completed his Monograph of the German *Staphylinidæ*), and it was regarded by him as new

† The antennæ (which are rather short and moniliform) are a little clearer, on

§ III *Prothoracis senibus dorsalibus e punctis 6 compositis*875 *Philonthus nigrutilus*.

*Staphylinus nigrutilus* et *ateimus*, *Gray, Col Micropt* 41 (1802)

*Philonthus ateimus*, *Erich Gen et Spec Staph* 492 (1839)

———, *Woll, Ins Mad* 584 (1854)

——— *nigrutilus*, *Kraatz, Nat der Ins Deutsch* 11 616 (1856)

———, *Woll, Cat Mad Col* 191 (1857)

*Habitat* insulas Canarienses, in Fuerteventura et Hierro solis adhuc haud detectus

There can be little doubt that this common European *Philonthus*, (which abounds in the Madeiran Group) is universal at the Canaries, though hitherto it does not happen to have been observed in either Fuerteventura or Hierro. In all the other islands I have myself captured it, whilst in Lanzarote and Gomera it was found likewise by Mr Gray, and in Teneriffe, Gomera, and Palma by Dr Crotch. It occurs in damp places generally, both at the edges of the streams and beneath decaying vegetable refuse, ascending from nearly the sea-level to an altitude of at least 8000 feet, nevertheless it is more abundant in the lower and drier districts than in the wooded ones (unless indeed the *P simulans* is but a phasis assumed by it in the latter)

876 *Philonthus simulans*

*P* præcedenti valde affinis (fortasse ejus varietas in regionibus sylvaticis prædominans), plexumque vix major et obsoletissime subæneo-tinctus, capite prothoraceque (oculo fortiter armato) evidentius transversim undulato-substrigulosus, illo sensim majore, hujus punctis sæpius submajoribus, antennis vix robustioribus et sæpius (præsertim ad apicem) subnigrescentioribus — Long corp lin 2-2½

*Philonthus simulans*, *Woll, Cat Mad Col* 190 (1857)

*Habitat* in Canaria, Teneriffa, Palma et Hierro, præsertim in intermediis humidis sylvaticis, late diffusus

Although I felt tolerably satisfied, when compiling my Madeiran Catalogue, that the *P simulans* of that Group is distinct from (however closely allied to) the *nigrutilus*, I must nevertheless acknowledge that an immense array of *Canarian* examples which I have since inspected leaves me in some doubt on the subject. Indeed it appears to me to be far from impossible that the *simulans* may in reality be but a state which the *nigrutilus* is apt to assume (more or less de-

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more rufo-testaceous, than the legs, and their third and terminal joints have a slight tendency to be faintly obscured—a character which I do not see alluded to either in Erichson's Monograph or elsewhere

cidedly) when occurring within the sylvan districts, for at times it certainly is not easy (unless perchance any of the differential features have escaped me) to draw a line of positive demarcation between the two. Still, in a general way, they are easily separated, and since also their habits are not quite the same, I prefer thinking it probable that I have overlooked some few of their characters to treating them as absolutely conspecific.

The *P simulans* (as above defined) differs from the *nigritulus*, merely, in being *on the average* just perceptibly larger, with its head a little more developed, in its having a more or less traceable (though always obscure) subænescent tinge, in its head and prothorax (when viewed beneath a high magnifying power) being more distinctly, though very minutely, transversely-waved or -substrigulose, and in its antennæ being *usually* a trifle thicker and darker (especially towards their apex). The Canarian examples have their elytra somewhat less deeply punctured than the Madeiran ones. It occurs pretty generally throughout the sylvan and subsylvan districts of intermediate elevations—predominating in those regions, just as the *nigritulus* does in the lower and more exposed ones. I have taken it in Grand Canary, Teneriffe (where it was found also by Dr. Crotch), Palma, and Hierro. My Grand-Canarian specimens are principally from the region of El Monte, and the Teneriffan ones from the laurel-woods above Taganana, Las Mercedes, La Esperanza, the Agua Garcia, and the Agua Mansa.

§ IV *Prothoracis seriebus dorsalibus e punctis 7 vel 8 compositis*

877 *Philonthus punctipennis*

*P* piceo-niger, nitidus, elytris profunde, densissime et argute punctatis, parce pubescentibus, suturâ paulo dilutiore, abdomine subtilius sed distincte punctato, plus minus metallico-tincto, antennis brunneis, ad basin piceo-testaceis, pedibus rufo-testaceis, hinc inde picescentioribus.—Long corp. lin. 4–5

*Philonthus punctipennis*, Woll., *Cat. Mad. Col.* 192 (1857)

*Habitat* in montibus Canariæ Grandis, rarissimus

This noble *Philonthus*, which occurs sparingly at Madeira, may at once be recognized by its large size and piceous-black hue (the abdomen, however, having a slight metallic lustre), by its prothoracic series being composed of seven or eight punctures on either side of the disc, by its elytra being deeply, closely, regularly, and sharply punctured, by its piceous-brown antennæ, and by its rufo-testaceous (though a little infuscated) legs. The only two examples which I have as yet seen from these islands were captured by myself, during the

spring of 1858, in Grand Canary—on the mountains above San Mateo, in the direction of the Roca del Souelho

§ V *Prothorax (et caput) plus minus crebri punctatus, linea mediâ longitudinali lœvi*

### 878 *Philonthus sericeus*.

*P. plumbeo-niger*, alutaceus, subopacus, capite (subtriangulari-quadrato) prothoraceque utrinque dense punctatis, clytris depressis, densissime et breviter fulvo-cinereo-sericeis, antennis pedibusque ferrugineis, illis ad basin tibisque sæpius paulo picescentioribus — Long corp ln  $1\frac{2}{3}$ – $2\frac{1}{2}$

Remus sericeus, *Holme, Trans Ent Soc Lond* 11 64 (1837)

—, *Steph, Man Brit Col* 401 (1839)

*Philonthus sericeus*, *Erich, Gen et Spec Staph* 509 (1839)

*Habitat* Lanzarotam et Fuerteventuram, per oras arenosas maritimas sub confectis et rejectamentis degens

The *P. sericeus* may be distinguished by its alutaceous, subopaque, leaden-black surface (the head and prothorax of which are coarsely and regularly punctured on either side, whilst the clytra and abdomen are very densely and minutely so, as well as closely beset with a short fulvo-cinereous pubescence) and by its ferruginous or piceo-ferruginous limbs. Its head is somewhat triangular-quadrate (being very straightly truncated behind) and its elytra are much flattened. It is strictly a littoral species, occurring (as in more northern latitudes) under sea-weed on the sandy shores. In such situations it was taken by Mr Gray and myself, during January 1858, both to the south of Arrecife in Lanzarote and of Puerto de Cabias in Fuerteventura—where I again met with it in the spring of the following year.

### 879 *Philonthus tenellus*, n. sp.

*P. angustus*, niger elytris paulo picescentioribus, nitidus, capite (convexo, subquadrato, apice subtriangulariter impresso) prothoraceque utrinque parce punctatis, elytris densius subtiliusque punctatis, parce cinereo-pubescentibus, abdominis segmentis singulis (præsertim basalibus) convexis et postice grosse denseque punctatis, antennis pedibusque piceo-ferrugineis, illis ad basin tarsisque clarioribus, palporum articulo ultimo acutissime conico — Long corp ln  $1\frac{2}{3}$ –2

*Obs* —Species *P. filiformis* (insularum Maderensium) valde affinis, sed differt capite paulo convexiore oculis majoribus, clytris sensim profundius punctatis abdominisque segmentis singulis convexioribus et (præsertim basalibus) postice grosse ac dense punctatis.

*Habitat* Teneriffam, inter lapillos ad marginem paludis cujusdam prope Sanctam Crucem copiose deprehensus

In its small size, extremely narrow outline, subquadrate head,

slightly picescent elytra, and the very acutely conical last joint of its palpi, this minute *Philonthus* is at first sight almost identical with the Madeiran *P. filiformis*. When closely inspected, however, it will be seen to differ in many respects from that species. Thus, its eyes (although not more prominent) are considerably larger, its head is, if anything, somewhat convexer, and more free from punctures in the centre, its elytra are a little more coarsely punctured, and its abdominal segments are, each of them, more impressed behind (and therefore convexer in front), and also (particularly the basal ones) *very rugosely and densely punctured posteriorly*. Hitherto I have observed it only in Teneriffe, where, however, I captured it in considerable abundance—from amongst wet shingle at the edges of a little stagnant pool at the extreme head of the Barranco Santo, close to S<sup>ta</sup> Cruz. And a single specimen (likewise Teneiffan) is now before me which was taken by Dr. Clotch.

880 *Philonthus xantholinoides*, n. sp.

*P. tenello* similis, sed (si ex unico specimine immaturo adjudicare licet) alteri coloratus (scilicet minus niger, prothorace fortasse etiam rufoferrugineo), capite majore, quadriangulo, basi rectius truncato, antice distinctius canaliculato (nec subtriangulariter impresso) et unà cum prothorace profundius utrinque punctato, oculis minoribus, elytris sensim majoribus, abdominis segmentis singulis ad basin minus grosse punctatis, antennis paulo longioribus.—Long. corp. lin. vix 2.

*Habitat* Teneriffam, juxta Sanctam Crucem cum præcedente captus.

Although I have but a single specimen, and that an immature one, to judge from, nevertheless the present *Philonthus* is so unmistakeably distinct (even in some few of its structural details) from the *P. tenellus* that I cannot omit it from this Catalogue. In its small size, narrow outline, and the acute terminal joint of its palpi it is very similar to that species, but its head is larger and squarer (being more straightly truncated behind), and, together with the prothorax, more deeply punctured, its eyes are smaller, its elytra are a trifle more developed, its abdominal segments are both less convex and less coarsely punctured at their respective bases, and its antennæ are longer. Its forehead, also, is more decidedly marked with a central channel in front, but less triangularly impressed. The example described from (which was taken by myself, in company with the last species, near S<sup>ta</sup> Cruz of Teneriffe) being immature, I cannot say much as to the differences of colour, but I believe that the *P. xantholinoides* will be found to be of a much paler hue, and perhaps to have its prothorax rufo-ferruginous.

## (Subfam V XANTHOLINIDES)

Genus 321 **XANTHOLINUS**Dahl, *Encyclop Method* x 475 (1825)881 **Xantholinus marginalis**

*X. niger*, elytris (vix subseriatim punctatis) lacte rufo-testaceis, capite magno, basi subrecte truncato, sat dense et profunde punctato punctulisque minutissimis intermediis uirato, prothoracis margine postico lato et laterali angustissime rufescentiore, seriebus dorsalibus 8-11-punctatis, abdomine, præsertim postice, rufescentiore, antennis rufo-fuscis, pedibus testacco-rufis—Long corp lin 3-3½

*Xantholinus marginalis*, Woll, *Trans Ent Soc Lond* 1 187 (1862)

*Habitat* in Lanzarota et Fuerteventura (aut saltem in ins parvâ adjacente "Lobos" dictâ), caules *Euphorbiarum* putidos destruens

In its brightly rufo-testaceous elytra, this beautiful *Xantholinus* "has [as I stated in my Paper, above alluded to, "on the *Euphorbia*-infesting Coleoptera of the Canary Islands"] much the colouring and general aspect of the common European *X. glabratus*, but it is smaller than that insect, with its head and prothoracic series much more densely punctured, with the margin (particularly the hinder one) of its pronotum diluted in hue, and with its elytra, abdomen, and legs respectively paler. It is very rare, and (so far as observed hitherto) quite peculiar to the damp, rotting *Euphorbia*-stems—among which it was taken by Mr Gray and myself, on the Risco, in the north of Lanzarote, during January 1858, as well as by myself, on the 28th of March of the following year, in the little island of Lobos, off the extreme north of Fuerteventura."

882 **Xantholinus hesperius**

*Xantholinus Hesperius*, Erich, *Gen et Spec Staph* 329 (1839)

—, Woll, *Ann Nat Hist* vi 100 (1860)

*Habitat* Canariam, Teneriffam et Palmam, haud infrequens

The *X. hesperius* of south-western Europe (and which occurs sparingly at Madeira) is probably universal in these islands—though hitherto I have observed it only in Grand Canary, Tenerife, and Palma (in the second of which it was found likewise by Dr Crotch and the Barão do Castello de Paiva, and in the third by Mr Gray). My Grand-Canarian specimens are from the region of El Monte, and the Teneriffan ones from the Agua Garcia and the vicinity of Orotava. *Primâ facie* it is a good deal allied to the European *X. linearis* (which, although common in the Madeiran Group, has not yet been detected at the Canaries), but its head is a little larger and less ob-

long (or more straightly truncated behind), more sparingly punctured, and with the frontal sulci longer, wider, and deeper, its prothorax has the punctures of its dorsal series rather diminished in number (there being usually from about nine to eleven of them), and those of the lateral ones fewer and less confused (or with an evident *tendency* to arrange themselves in a curve), and its elytra are somewhat more remotely and coarsely punctured, and have their apical edge (and frequently the suture also) more or less translucid, or testaceous

### 883 *Xantholinus punctulatus*

*Staphylinus punctulatus*, Payk., *Mon Staph Suec* 30 (1789)

*Xantholinus punctulatus*, Erich., *Gen et Spec Staph* 328 (1839)

— —, Woll., *Ins Mad* 577 (1854)

— —, Id., *Cat Mad Col* 188 (1857)

*Habitat* in Lanzarota, Teneriffa et Gomeia, passim

The common European *X punctulatus* (which is tolerably abundant at Madeira) may be known by its black hue (the elytra, however, having usually a just perceptible ænescent tinge), by its head being very coarsely and rugosely punctured on either side, and very straightly truncated along its basal edge, by its prothorax having the dorsal series composed of comparatively few punctures, and the lateral ones very evidently curved, by the punctures of its elytra having a decided *tendency* to arrange themselves in longitudinal rows, and by its antennæ being rather short. It appears to be somewhat scarce at the Canaries. I have taken it at La Esperanza in Teneriffe, and it was found by Mr Gray in Lanzarote, and by Dr Crotch in both Teneriffe and Gomera.

The Canarian examples of the *X punctulatus* seem to belong to the slightly larger state referred to by Erichson—in which the colour is deep black with (at any rate on the elytra) an appreciable ænescent tinge, the limbs a little darkened, and the punctures of the prothoracic dorsal series rather reduced in number. The eyes, also, appear to be less minute than in the ordinary type, and the forehead somewhat freer from punctures. But I imagine they can scarcely be indicative of an additional (closely allied) species.

### Genus 322 *LEPTACINUS*

Erichson, *Kaf der Munk Brand* 1 429 (1837)

### 884 *Leptacinus parumpunctatus*

*L nitidissimus*, niger, elytris (extus seriatim punctatis) paulo dilutioribus necnon ad angulos singulos externos pellucido-testaceis,

capite triangulari, utrinque valde profunde sed parce punctato, prothoracis seriebus dorsalibus circa 5-6-punctatis (punctis magnis), antennis testaceo-piceis, pedibus piceo-testaceis — Long corp. lin  $2\frac{1}{2}$ – $3\frac{1}{2}$

*Staphylinus parumpunctatus*, Gyll, *Ins. Suec.* iv 481 (1827)

*Gyrolhypnus parumpunctatus*, Mann, *Brachel* 33 (1831)

*Leptacinus parumpunctatus*, Erich, *Gen. et Spec. Staph.* 353 (1839)

——, Knaatz, *Nat. der Ins. Deutschl.* ii 648 (1857)

*Habitat* insulas Canarienses, in Hierro solâ adhuc haud observatus

The European *L. parumpunctatus* (which occurs sparingly at Madeira) is widely diffused over the Canarian Group, where there can be no doubt that it is universal — indeed Hierro is the only island of the seven in which it does not happen to have been observed. In Lanzarote, Fuerteventura, Grand Canary, Teneriffe, and Palma I have myself captured it, whilst in Teneriffe and Gomera it was found by Dr. Crotch, and in Lanzarote and Palma by Mr. Gray.

### 885 *Leptacinus linearis*

*L. angustus*, nitidus, niger, elytris (extus leviter subseriatim punctatis) vel concoloribus vel paulo dilutionibus, capite prothoraceoque (oculo fortissime armato) subtilissime transversum undulato-substrigulosum, illo subtriangulari utrinque profunde sed parce punctato, hujus seriebus dorsalibus circa 8-9-punctatis, antennis testaceo-piceis, pedibus piceo-testaceis — Long corp. lin  $1\frac{3}{4}$

*Staphylinus linearis*, Grav, *Col. Micropt.* 43 (1802)

*Gyrolhypnus sulciformis* (Kby), Steph, *Ill. Brit. Ent.* v 260 (1832)

*Leptacinus linearis*, Knaatz, *Nat. der Ins. Deutschl.* ii 649 (1857)

*Habitat* Lanzarotam et Teneriffam, minus frequens

Like the last species, this European *Leptacinus* (which also occurs sparingly in Madeira) is widely spread at the Canaries — though hitherto it has been detected only in Lanzarote and Teneriffe (in the former by myself, and in the latter by Dr. Crotch). In all probability, however, it will be found to be equally universal, though its smaller size renders it more likely to escape observation.

### Genus 323 *OTHIVS*

(Leach) Stephens, *Ill. Brit. Ent.* v 253 (1832)

### 886 *Othius brachypterus*, n. sp.

*O. niger*, elytris (brevibus, parce leviter punctatis) piceis, capite crasso, suboblongo, utrinque parce sed parum profunde punctato, oculis minutissimis, prothorace utrinque punctis 3 vel 4 notato aliusque perpaucis versus latera irrorato, abdomine dense sed leviter subasperato-punctulato, obsolete submetallico-tincto, ad api-

cem dilutione, antennis rufo-, ad basin pedibusque piceo-testaceis  
—Long corp lin 3

*Habitat* Gomeiam, a W D Crotch semel captus

The only specimen which I have seen of this *Othius* was captured by Dr Crotch, during the spring of 1862, in Gomera. It is well distinguished by its black hue, extremely short, piceous, finely and sparingly punctulated elytra, rather thick oblong head, faintly sub-metallic abdomen, and piceo-testaceous limbs. In its minute eyes and general *facies* it has a good deal in common with the Madeiran *O. Jansoni*, but it is a smaller insect, with the limbs shorter, and the elytra much more finely sculptured and less developed.

### 887 *Othius philonthoides*, n sp

*O. præcedente* minor, angustior, subnitidior, elytris pallidioribus (se infuscato-testaceis), minus abbreviatis et profundius punctatis, capite subminore, utrinque vix parcius punctato, oculis paulo majoribus, abdomine etiam levius subasperato-punctulato, haud metallico-tincto, antennis pedibusque sensim brevioribus, pallidioribus —Long corp lin  $2\frac{1}{2}$

*Habitat* Canariam Grandem, in regione El Monte semel repertus

This little *Othius* is of about the size and general outline of the larger examples of the *Philonthus nigritulus*, and it may be known from the preceding species by being smaller and narrower, with its limbs rather shorter and paler, and with its elytra likewise paler, somewhat less abbreviated, and much more coarsely punctured. Its head, also, is relatively a trifle smaller, its eyes are not quite so diminutive, and its abdomen is even more finely punctured still and apparently free from the slightest metallic lustre. The unique example described from I captured, during the spring of 1858, in the region of El Monte in Grand Canary.

(Subfam VI PÆDERIDES)

### Genus 324 **ACHENIUM**

(Leach) Curtis, *Brit Ent* iii 115 (1826)

### 888 *Achenium subcæcum*, n sp

*A. pallidum*, valde depressum, apterum, capite prothoraceque nitidissimis, rufo-testaceis, illo late obcordato profunde sed parce punctato oculis minutissimis (superne haud observandis), hoc trapeziformi (antice lato) et utrinque parcius punctato, elytris brevissimis, parcius ac leviter punctatis et (una cum abdomine) testaceo, antennis (gracilibus) tibusque infuscato-, femoribus (latis) tarsisque pallido-testaceis —Long corp lin  $2\frac{1}{2}$

*Habitat* Lanzarotam, in montibus supra Haniam exemplar unum sub lapide colloxi

In its extremely depressed surface, broadly obcordate head, trapeziform prothorax, wide femora, very deeply sinuated anterior tibiae, and slender posterior feet, this singular Staphylinid is a normal *Achenium*, nevertheless its totally apterous body, greatly abbreviated elytra, and almost obsolete eyes (which are so diminutive and punctiform as to be quite imperceptible from above) give it a character peculiarly its own. The excessive paleness of its entire colour (the head, prothorax, and tibiae being rufo-testaceous, whilst the elytra, abdomen, femora, and tarsi are more pallid still) will further distinguish it from anything else with which we have here to do. The only specimen which I have seen was captured by myself, from beneath a stone, on the hills above Hania, in the north of Lanzarote.

### 889 *Achenium salinum*, n. sp.

*A.* angustum, convexiusculum, alatum, capite prothoraceque nitidis, rufo-ferrugineis, regulariter sat profunde punctatis, illo triangulari-ovali oculis parum magnis prominulis, hoc angusto (antice paulo latiore) in lineâ mediâ lævi, elytris minus nitidis, pallido-testaceis, ad basin infuscatis, levissime parce punctulatis, abdomine subopaco, rufo-brunneo, antennis (gracilibus) pedibusque rufo-ferrugineis, tarsis posterioribus pallidioribus.—Long. corp. lin.  $2\frac{1}{3}$

*Habitat* Lanzarotam, ad marginem lacus ejus salini "Januvio" dicti Martio exeunte a. d. 1859 specimen unicum deprehendi.

Like the last one, this species also is unique and was captured in Lanzarote. Nevertheless in its habits it is totally dissimilar, for whilst the *A. subcecum* was found at a comparatively high elevation on the mountains in the north of the island, the *salinum*, on the contrary, I captured at the edge of the curious salt lake of Januvio (which adjoins the south-western coast)—running rapidly over the mud in a most briny spot.

In its extremely narrow and comparatively convex body, as well as in its more oblong (or less obcordate) head and the fact of its prothorax being but very slightly widened in front, the *A. salinum* has much the *primâ facie* aspect of a *Lathrobium*, but its greatly developed femora, its very deeply sinuated anterior tibiae, and its slender posterior feet (with their rather elongate terminal joint) refer it unmistakably to *Achenium*, whilst even in the shape of its head and prothorax it is *intermediate* between the two genera. In mere specific details, it may be well distinguished by its rufo-ferruginous head and prothorax—which are regularly and (for an *Ache-*

*nium*) somewhat closely punctured, the latter alone having a central glabrous space, by its very slightly shining, most lightly punctured, *testaceous* elytra (which, however, are a little infuscated at their base), by its subopaque, reddish-brown abdomen, and by its rufo-ferruginous limbs

### Genus 325 LATHROBIUM

Gravenhorst, *Col Micropt* 179 (1802)

#### 890 *Lathrobium labile*

*L. angustissimum*, nigrum, capite quadriato-ovali, profunde punctato, prothorace angusto, oblongo, utrinque (necnon in dorso biserialiter) profunde punctato, elytris profunde et dense striato-punctatis, postice lævioribus et plus minus testaceis, abdomine dense leviter subasperato-punctulato, antennis (gracilibus) pedibusque rufo-testaceis, his plus minus picescentioribus—Long corp lin 2-2½

*Lathrobium labile*, *Erich, Gen et Spec Staph* 594 (1839)

*Habitat* Teneriffam, inter lapillos ad marginem paludis ejusdam parvæ in "Barranco Santo" juxta Sanctam Crucem lectum

A Grecian example, communicated by Dr Kiaatz, of Erichson's *A. labile* (which occurs also in Sardinia) agrees precisely with the Canarian specimens now before me. The species may be known by its minute size and extremely narrow outline, by its (rather elongate) head being regularly and deeply punctured, and its prothorax also (which has a double row of punctures down its disc) on either side, by its elytra (which are more or less rufo-testaceous along their hinder edge, and occasionally even along the suture) being closely and coarsely striate-punctate, and by its rufo-testaceous limbs—the legs, however, being usually a little clouded or picescent. The only specimens which I have seen (sixteen in number) were taken by myself (in company with the *Philonthus tenellus* and *Anthicus lapidosus*) from amongst wet shingle at the edges of a little stagnant pool at the extreme head of the Barranco Santo, close to Sta Cruz, in Teneriffe.

#### 891 *Lathrobium multipunctatum*

*Lathrobium multipunctatum*, *Grav, Col Micropt* 52 (1802)

— — —, *Erich, Gen et Spec Staph* 591 (1839)

— — —, *Woll, Ins Mad* 588 (1854)

— — —, *Id, Cat Mad Col* 193 (1857)

*Habitat* in humidis Teneriffæ et Palmæ, sat rarum

Although rather abundant at Madeira, the European *L. multipunctatum* is decidedly scarce in these islands—the very few Canarian

examples which I have seen having been captured by myself in Teneriffe and Palma. My Teneriffan specimens are from moist places in the vicinity of S<sup>ta</sup> Cruz, Taganana, Las Mercedes, and Ycod el Alto.

### Genus 326 **DOLICAON**

Laporte, *Etud Ent* 1 119 (1834)

#### 892 **Dolicaon nigricollis**

*D* apterus, subcylindricus, nitidus, niger, elytris (parce et leviter punctulatis) abdominisque segmentis ultimis testaceo-rufis, capite prothoraceque parce sed parum profunde punctatis, antennis pedibusque rufo-testaceis.

*Mas* abdominis segmento sexto infra profunde inciso, quinto integro—Long corp ln  $2\frac{2}{3}$ – $3\frac{1}{4}$

*Dolicaon ruficollis*, Woll, *Trans Ent Soc Lond* 1 188 (1862)

*Habitat* Lanzarotam et Canariam, vel sub lapidibus vel in truncis *Euphorbiarum* emortuis putridis degens.

In a Paper "on the *Euphorbia*-infesting Coleoptera" of these islands, I stated that "the present *Dolicaon* appears to be very closely allied to the *D. allynicus*—with which indeed (judging from the diagnosis) I should have united it, had I not been informed by Dr Kraatz that its head and prothorax are somewhat more lightly punctured, and its antennæ a little shorter, than is the case in that species. It is not impossible, therefore, that it may be but a geographical phasis of the *D. allynicus*, but, as I have no type of the latter for comparison, I will not venture to record it absolutely as such." It is not uncommon in Lanzarote, where it occurs both under stones and beneath the moist rotting bark of old *Euphorbias*, and I took a single specimen, during the spring of 1858, in the region of El Monte in Grand Canary. In Lanzarote it was found also by Mr Gray.

#### 893 **Dolicaon ruficollis**

*D* præcedenti valde affinis et forsân ejus varietas insularis, differt solum (ut mihi videtur) corpore sæpius paulo majore, prothorace (ut elytris) testaceo-rufo (haud nigro)—Long corp ln  $3\frac{1}{2}$ – $3\frac{2}{3}$

*Dolicaon ruficollis*, Woll, *Trans Ent Soc Lond* 1 189 (1862)

*Habitat* in locis similibus ac præcedens, sed in Fuerteventura necnon in insulâ parvâ adjacente "Lobos" dictâ, rarissimus.

Possibly this may be but an insular state of the last species—from which it merely differs (so far as I can detect) in being a trifle larger, and in having its prothorax (like the elytra) pale rufous instead of black. I have taken it, sparingly, both in Fuerteventura itself and on the little island of Lobos (off the extreme north of it)—in the latter locality from within a rotten *Euphorbia*-stem.

Genus 327 **STILICUS.**Latreille, *Regn Anim* iv 436894 **Stilicus affinis***Stilicus affinis*, *Erich*, *Kaf der Mark Brand* 1 522 (1837)— — —, *Redt*, *Fna Austr* 720 (1849)*Rugilus affinis*, *Woll*, *Ins Mad* 592 (1854)— — —, *Id*, *Cat Mad Col* 195 (1857)*Habitat* Teneriffam, a W D Crotch repertus

Although common at Madeira, I have not myself observed this European *Stilicus* at the Canaries, but six examples of it are now before me which were captured by Dr Crotch, during the spring of 1862, in Teneriffe

Genus 328 **SCOPÆUS.**Erichson, *Gen et Spec Staph* 604 (1839)895 **Scopæus trossulus**, n sp

*S angustus*, subtilissime punctulatus, nitidus, minute cinereo-sericeus, piceo-ferrugineus, capite subquadrato, prothorace subovato, rufescentiore basi in medio tenuiter carinato et obsolete bumpresso, elytris postice plus minus dilutioribus abdomine subopaco densissime subpunctato-ruguloso, apice dilutiore, antennis pedibusque testaceis — Long corp  $\ln 1\frac{1}{2}$

*Obs* — *S lævigato* Gyll valde affinis, sed subangustior, capite vix minore et etiam paulo subtilius punctulato, elytris brevioribus, colore omnino subpallidiore, capite prothoraceque sensim nitidioribus

*Habitat* Fuerteventuram, Canariam et Teneriffam, inter lapillos ad margines aquarum (vel fluentium vel stagnantium) parce degens

Apparently extremely rare, occurring amongst wet shingle at the edges of pools and streams In such situations I have taken it at La Antigua in Fuerteventura, at Arguimgun in Grand Canary, and in the Barranco Santo (near S<sup>ta</sup> Cruz) of Teneriffe It is possible that it may be but a geographical modification of the European *S lævigatus*, which at first sight it almost entirely resembles It is, however, just perceptibly narrower, with its head not quite so much developed and a little more finely punctulated, its elytra are appreciably shorter, its entire colour is perhaps a shade paler, and its head and prothorax are rather more shining

896 **Scopæus nigellus**, n sp

*S angustissimus*, subtilissime dense punctulatus, subopacus, minute cinereo-sericeus, niger, capite triangulari-subquadrato prothorace subovato, basi in medio obsolete bumpresso elytris ab-

domineque (densissime subpunctato-ruguloso) postice vix dilutioribus, antennis (brevibus) pedibusque piceo-testaceis, tarsis clarioribus—Long corp ln  $1\frac{1}{3}$

*Habitat* Gomeram, a W D Crotch semel captus

A single specimen only of this little *Scopæus*, taken by Dr Crotch (during the spring of 1862) in Gomera, has hitherto come beneath my notice. It may be known by its minute size and very narrow outline, by its subopaque and nearly black surface (the elytra being only a trifle more picescent posteriorly—though the limbs are of a piceo-testaceous hue), by its subtriangular-quadrate head, and by its much abbreviated antennæ. It is a little narrower and darker than the European *S minutus*, with its head rather less developed, its punctuation finer and closer, and its antennæ somewhat shorter and less robust.

#### Genus 329 LITHOCHARIS.

(Dejean) Boisd et Lacord, *Faun Ent des Env de Paris*, 1 431 (1835)

#### 897 *Lithocharis quadriceps*, n sp

*L* subnitida, griseo-pubescent, nigra elytris rufo-ferrugineis, capite (lato, quadrato) prothoraceque (vix picescentiore) densissime punctatis, abdomine picescentiore, apice ferrugineo, antennis pedibusque rufo-ferrugineis—Long corp ln  $2\frac{1}{4}$ – $2\frac{1}{2}$

*Obs*—*L castaneæ* Grav affinis, sed capite prothoraceque nigrescentioribus et minus rugose punctatis, illo longiore (magis quadrato) oculis sensim majoribus, tarsis paulo longioribus ac multo gracilioribus.

*Habitat* in Lanzarota et Fuerteventura, aliquanto rara

This large and beautiful *Lithocharis* I have observed hitherto only in Lanzarote and Fuerteventura—namely, near Haria of the former (where it was taken likewise by Mr Gray) and (from under camels' dung) near Betancuria of the latter. In its densely punctured head and prothorax and rufo-ferruginous elytra, it has much the *primæ facie* aspect of the European *L castanea*, but its head and prothorax are blacker (or less piceous) and rather less rugosely punctured (the former also being larger and more quadrate, with the eyes not quite so minute), and its feet are a little longer and very much slenderer. It was examined by Dr Kraatz, and regarded by him as new.

#### 898 *Lithocharis subcornacea*, n sp

*L* præcedente paulo angustior, magis opaca ac densius subtiliusque cinereo-pubescent, capite (angustiore, oblongiore) prothoraceque multo levius punctulatis (hæc minutissime obsolete punctulato, quasi subcornaceo), elytris obscurioribus (vel piceis in limbo fere nigres-

centibus, vel fusco-ferrugineis), antennis pedibusque sæpius paulo obscurioribus, illarum articulis intermediis plus minus evidenter nigro-variegatis — Long corp ln 2-2 $\frac{1}{4}$

*Habitat* in Canaria, Teneriffa, Gomera, Palma et Hierro, passim

This *Lithocharis* differs from the preceding one in being a little narrower and more opaque, and more densely clothed with a finer and shorter cinereous pubescence, in its head (which is much straightened on either side) being especially narrower and less quadrate, and also, together with the prothorax, much more lightly punctulated (indeed the latter has more the appearance of being coriaceous than ‘punctulated’), in its elytra being of an obscurer hue (either dull rufo-piceous and still darker towards the sides, or else uniformly brownish ferruginous), and in the intermediate joints of its antennæ being more or less variegated with black. I have captured it in the region of El Monte in Grand Canary, as well as in Palma and Hierro, and it was found in Teneriffe and Gomera by Dr Crotch. It would seem to ascend to a high elevation, for Dr Crotch’s Teneriffan examples are marked as having been taken on the Cumbre adjoining the Cañadas

#### 899 *Lithocharis ochracea*

*L. subopaca*, densissime cinereo-sericea, minutissime punctulata, capite nigro, subtriangulari, oculis magnis (sed haud prominentibus), prothorace elytrisque subquadratis, plus minus infusate rufo-ferrugineis (illo sæpius paulo rufescentiore), abdomine fusco-ferrugineo, antennis pedibusque testaceis — Long corp ln 1 $\frac{2}{3}$ -2

*Pæderus ochraceus*, Grav, Col Micropt 59 (1802)

*Lithocharis ochracea*, Eich, Gen et Spec Staph 623 (1839)

— —, Woll, Ins Mad 590 (1854)

— —, Id, Cat Mad Col 193 (1857)

*Habitat* in Lanzarota, Fuerteventura, Teneriffa et Gomera, haud infrequens

There can be no doubt that this common European *Lithocharis* (which abounds in Madeira, and which is widely spread over the world) is universal at the Canaries, though hitherto it has been observed in only four out of the seven islands of the Group. I have taken it in Lanzarote, Fuerteventura, and Gomera, and it was found in Teneriffe by Dr Crotch. It occurs beneath vegetable rejectamenta generally, independent of elevation, and in the Rio Palmas of Fuerteventura I once met with it, in profusion, amongst the refuse of a camels’ stable

#### 900 *Lithocharis nigrifolia*

*L. angusto-linearis*, nigra, subnitida, cinereo-pubescent, dense sed

parum profunde punctata, capite (elongato-subquadrato) prothoraceque lineâ mediâ lævi (in hâc postice obsolete subelevatâ) instructis, abdomine subopaco densiusque cinereo-sericeo, antennis (breviusculis) pedibusque piceo-testaceis, tarsis clarioribus — Long corp lin  $1\frac{1}{2}$

*Lithocharis nigritula*?, *Erich, Gen et Spec Staph* 625 (1839)

*Habitat* Teneriffam, inter lapillos ad marginem paludis cujusdam parvæ in "Barranco Santo" juxta urbem Sanctæ Crucis capta

Judging from the diagnosis, I have little doubt that this small *Lithocharis* is conspecific with Erichson's *L. nigritula* from Sicily, and it may easily be known by its narrow, linear outline, and by its black, slightly shining, and densely but rather coarsely punctured surface, by its (elongate-squarish) head and prothorax having each of them (though particularly the latter) a central unpunctured line, and by its antennæ and legs (the former of which are rather short) being of a piceo-testaceous hue. If, however, it should prove hereafter to be distinct, I would then propose for it the trivial name of *maura*. The only two examples which I have seen were taken by myself, from amongst wet shingle at the edges of a small stagnant pool, at the head of the Barranco Santo (close to S<sup>ta</sup> Cruz) in Teneriffe—in company with the *Scopæus tossulus*, *Philonthus tenellus*, *Anthicus lapidosus*, the *Perileptus nigritulus*, and other Coleoptera of similar (subaquatic) habits

#### 901 *Lithocharis melanocephala*

*L. angusta*, nitida, parce griseo-pubescent, profundius ac minus dense punctata, capite elongato-subquadrato, vel piceo-nigro, vel rufo-piceo, vel etiam rufo-ferrugineo, prothorace testaceo-rufo, lineâ mediâ paulo læviore, elytris piceo-testaceis, antennis rufo-testaceis (interdum articulis intermediis infuscatis), pedibus testaceis — Long corp lin  $1\frac{1}{2}$ -2

*Pæderus melanocephalus*, *Fab, Ent Syst* 111 538 (1792)

*Lithocharis melanocephala*, *Erich, Gen et Spec Staph* 614 (1839)

——, *Woll, Ins Mad* 591 (1854)

——, *Id, Cat Mad Col* 194 (1857)

*Habitat* insulas omnes Canarienses, aliquanto vulgaris

This common European insect, which is universal in the Maderran Group, is universal likewise at the Canaries—in the whole seven islands of which I have myself captured it. In Teneriffe and Gomera it was found also by Dr Crotch. It is rather variable in stature, and exceedingly so in the colour of its head—which is normally black, but very often piceous, and occasionally bright rufo-ferruginous (or scarcely darker than the prothorax). It occurs principally beneath

stones, and is nearly independent of elevation—my Teneriffan specimens being from S<sup>ta</sup> Cruz and the mountains above it, from Taganana, Las Mercedes, La Esperanza, Souzal, and the Agua Mansa

902 *Lithocharis brevipennis*, n sp

*L* præcedenti fere similis, fortasse ejus varietas regionibus valde elevatis Teneriffæ propria, sed paulo minor angustior, oculis sensim minoribus elytrisque brevioribus (sc prothorace haud longioribus), capite rufo-ferrugineo, ad basin vix minus recte truncato—Long corp  $\text{lin } 1\frac{1}{2}$

*Habitat* sub lapidibus in montibus valde excelsis Teneriffæ, usque ad 10,000' s m ascendens

Although in colour and outline almost similar to the *L melanocephala*, I am uncertain whether the present *Lithocharis* can be regarded as any modification of that insect peculiar to the loftiest altitudes of Teneriffe. The only examples of it (four in number) which I have myself taken were captured on the elevated Cumbre overlooking the Cañadas at nearly 10,000 feet above the sea, and two more have been communicated by Dr Clotch, which I have little doubt were met with in the same region. It differs from the *melanocephala* in being a little smaller, with its eyes still more minute, and its elytra very appreciably shorter (being, in fact no longer than the prothorax). Its head appears to be rufo-ferruginous (as in the *palea* specimens of the *melanocephala*), and, if anything, somewhat less straightly truncated at the base.

903 *Lithocharis debilicornis*

*L* subopaca, pallida, subgrosse pubescens capite (lato, subobcordato, oculis prominentibus) prothoraceque (breviusculo) rufo-testaceis, alutaceis sat grosse sed haud profunde punctatis, elytris testaceis, abdomine fusco-testaceo, antennis (brevissimis, articulis intermediis brevibus) pedibusque testaceis—Long corp  $\text{lin } 1\frac{1}{2}$ — $1\frac{1}{2}$

*Lithocharis debilicornis* Woll Cat Mad Col 194 (1857)

*Habitat* Teneriffam et Palmam, rarissima

I have not taken the trouble to dissect this curious insect, but I think it far from unlikely that a careful examination of its oral organs would disclose sufficient structural peculiarities to render its isolation from *Lithocharis* desirable,—its greatly abbreviated antennæ (all the joints of which, except the basal and apical ones, are much shortened), combined with its prominent eyes and the more fusiform apex of its maxillary palpi, giving it a character essentially its own. In mere specific details it may easily be recognized by its entirely pallid hue and subopaque surface, and by its head and prothorax (the former of

which is wide and obcordate, whilst the latter is somewhat short) being alutaceous and distinctly, but not deeply, punctured. It appears to be very rare, and indeed it entirely escaped my own observation in these islands. A single individual, however, was captured by Mr Gray, during February 1858, in Palma, and five more are now before me which were taken by Dr Crotch, during the spring of 1862, in Teneriffe. It is not uncommon around Funchal in Madeira, and occurs sparingly in the south of Europe—it having been described by M. Allard, subsequently to the publication of my Madeiran Catalogue, under the specific name of *brevicornis*.

### Genus 330 **SUNIUS**

(Leach) Stephens, *Ill Brit Ent* v 274 (1832)

#### 904 *Sunius myrmecophilus*, n. sp.

*S* crassiusculus, compactus, rufo-ferrugineus, subopacus, dense griseo-pubescent, capite prothoraceque creberrime et minutissime subreticulato-punctulatis, illo crasso lato subobcordato in fronte convexo oculis minutis prominulis, hoc subtrapeziformi antice lato, elytris rugosis subpunctulato-asperatis, abdomine fuscescentiore, antennis breviusculis, pedibus rufo-testaceis.—Long corp. ln 2

*Habitat* Canariam et Teneriffam, in *Myrmecarium* nidis degens

This remarkable *Sunius* (which was examined by Dr Kraatz, and regarded by him as new) is at once distinguished by its rather thick and compact body, rufo-ferruginous hue, and wide, convex, somewhat obcordate head—which (together with its subtrapeziform, anteriorly broad prothorax) is most minutely but densely punctulated. Its eyes are small and prominent, and its limbs are rather short. It seems to be very rare, and confined (so far as I have observed hitherto) to the nests of a species of *Myrmica*—occurring, in company with the ants, beneath stones. In such situations I have taken it sparingly in Grand Canary and Teneriffe. My Teneriffan examples are principally from the Agua Mansa, but I captured a single individual at no great distance above the Puerto Orotava.

#### 905 \* *Sunius megacephalus*, n. sp.

*S* gracilis, rufo-ferrugineus, opacus, breviter griseo-pubescent, capite prothoraceque valde profunde et rugose subreticulato-punctulatis, illo magno suboblongo oculis parvis, hoc angusto subovato, elytris rugose sed paulo minus dense asperato-punctulatis, rarius antice vix fuscescentioribus, abdomine rugose punctato, obscuriore (apice rufo-ferrugineo excepto), segmento quinto antice nigro, antennis pedibusque elongatis, gracilibus, pallide testaceis.—Long corp. ln 2-2½

*Habitat* in intermediis editionibusque Teneriffæ et Palmæ, usque ad 9000' s m ascendens

In their narrower and more fragile bodies, more oblong and pedunculated heads, smaller prothoraces, and longer limbs the present and two following *Sunni* are quite on a different type from the preceding one—having more in common with the Madeiran *Mecognathus chinensis* which perhaps may be but an extreme modification of *Sunius*. The *S. megacephalus* is, on the average, rather the largest of the three and is generally of an obscure rufo-ferruginous hue—the elytra being immaculate (or sometimes very faintly clouded anteriorly), and its head is always greatly developed. I have observed it hitherto only in Teneriffe and Palma (in the former of which it was found also by Dr Crotch), where it occurs at intermediate and lofty elevations—ascending to at least 9000 feet above the sea. My Teneriffan specimens are from the laurel-woods above Taganana, Souzal the Agua Mansa, and the Cumbre above it, and from the opposite Cumbre adjoining the Cañadas.

906 *Sunius dimidiatus*, n sp

*S* præcedenti similis, sed plerumque vix minor angustior, elytris in parte basali læte et abrupte nigris—Long corp lin 2-vix 2½

*Habitat* in Canaria, Teneriffa, Gomera et Hierro, sub lapidibus in inferioribus intermediisque præcipue degens

It is barely possible that this *Sunius* may be but a well-marked variety, or state, of the *megacephalus*, but I think that it is truly distinct, though immature examples of both (in which the colour is not fully developed) are not always readily separable. On the average, the *S. dimidiatus* is just perceptibly smaller and narrower than its ally, and its elytra have their basal half conspicuously and abruptly black. It appears to have a rather lower range than the *megacephalus*, for, although it occurs equally at intermediate altitudes it descends to almost the sea-level. I have taken it in the region of El Monte in Grand Canary, as well as in Teneriffe, Gomera, and Hierro. My Teneriffan examples are from S<sup>ta</sup> Cruz and the mountains above it, the vicinity of the Puerto Orotava, the Agua Mansa, and from the hills between Laguna and Tacaronté.

907. *Sunius pallidulus*, n sp

*S* præcedentibus duobus affinis, sed paulo minor, omnino pallidior (elytris pallidis immaculatis, abdominis segmento quinto solum nigro), sensim minus opacus ac minus rugose sculpturatus, capite

minore, pone oculos (submajore) paulo magis rotundato, antennis pedibusque minus elongatis—Long corp lin vix 2

*Habitat* Teneriffam et Gomeram, a W D Crotch repertus

The only three examples which I have seen of this species were taken by Dr Crotch—two of them in Teneriffe, and the remaining one in Gomera. It seems to be quite distinct both from the *megacephalus* and *dimidiatus*, being a little smaller than even the latter, and altogether paler than both of them—the fifth abdominal segment being the only portion of its surface which is black. It is also a trifle less opaque, and not quite so roughly sculptured, its head is less developed, and more suddenly rounded behind the eyes (which are themselves a trifle larger), and its limbs are appreciably shorter.

(Subfam VII STENIDES)

Genus 331 STENUS

Latreille, *Precis des Caract Gen des Ins* 77 (1796)

§ I *Corpus alatum abdomen marginatum tarsi articulo quarto simplici*

908 *Stenus guttula*

*Stenus guttula*, Mull, in *Germ Mag* iv 225 (1821)

— —, *Erich, Gen et Spec Staph* 691 (1839)

— —, *Woll Ins Mad* 597 (1854)

— —, *Id, Cat Mad Col* 196 (1857)

*Habitat* in aquis Canariæ, Teneriffæ et Palmæ, rarissimus

The European *S guttula*, which abounds in the Madeiran Group, is apparently rare in these islands—the very few examples which I have seen having been taken by myself in Grand Canary, Teneriffe, and Palma. My Grand-Canarian specimen was captured on the ascent to the Pinal above San Bartolomé (in the central district of Tarajana), and the Palman ones are from the Barianco de Galga.

§ II *Corpus apterum abdomen marginatum tarsi articulo quarto bilobo (sed tamen angusto)*

909 *Stenus æneotinctus*, n sp

*S niger* vel piceo-niger, conspicue æneo-tinctus, subnitidus, parce griseo-pubescent, capite, prothorace elytris (brevissimis) paulo inæqualibus, valde profunde, dense et rugose punctatis, abdomine minus profunde (sed tamen grosse) punctato, antennis longiusculis, gracilibus, apice nigrescentibus, versus basin, palpis pedibusque saturate pallido-testaceis—Long corp lin  $1\frac{2}{3}$ —2

*Habitat* in Canaria, Teneriffa, Gomeia, Palma et Hierro, in intermedus humidis sylvaticis, rarissimus

Although extremely rare, this *Stenus* is widely spread over the archipelago—occurring in moist, sylvan (and subsylvan) spots of intermediate and rather lofty elevations, and having been detected in all the islands except Lanzarote and Fuerteventura (where it probably does *not* exist). I have taken it in Grand Canary, Teneriffe, Palma, and Hierro, and four specimens were captured in Gomera (“in the laurel-woods above Hermigua”) by Dr Clotch. My Teneriffan examples are from the sylvan mountains above Taganana, Las Mercedes, the Agua Garcia, the Agua Mansa, and Ycod el Alto. It may at once be known by its slightly shining, *uneven* and most coarsely sculptured surface—the head, prothorax, and elytra (the last of which are much abbreviated) being *very* deeply and *so* ghly punctured. Its antennæ are rather long and slender, and their basal portion, together with the palpi and legs, are pale diluted-testaceous.

(Subfam VIII OXYTELIDES)

Genus 332 **BLEDIUS**

(Leach) Stephens, *Ill. Brit. Ent.* v 307 (1832)

910 *Bledius januvianus*, n sp

*B.* capite prothoraceque grosse alutaceis subopacis, illo nigro utrinque cornu sublamelliiformi (præsertim in maribus) instructo, hoc piceo lato transverso-subquadrato canaliculato parce profundèque punctato, elytris densius sed minus profunde punctatis, testaceis sed versus suturam latissime ac suffuse nebulosis, abdomine nigro, apice paulo dilutiore, antennis rufo-ferrugineis, basi clarioribus, pedibus testaceis—Long corp. lin 3-3½

*Habitat* Lanzarotam, rarissime ad marginem lacus ejus salini “Januvio” dicti, Martio a d 1859, exemplaria quinque collecta

I am exceedingly doubtful whether this *Bledius* should be regarded as more than a greatly developed state of the European *B. bicornis*—with which in colour, sculpture, and general *facies* it is almost coincident. It seems indeed to differ merely (so far as I can detect) in being considerably larger, with its eyes still more prominent, and its prothorax a little wider and more coarsely punctured. Its comparatively large size and testaceous elytra, combined with its simple (or *uncornuted*) prothorax in both sexes, and the erect compressed somewhat lamelliiform horn with which either side of its forehead is furnished, will at once distinguish it from the two following species. It appears to be exceedingly rare, and peculiar to saline spots—the few specimens which I have seen having been captured by myself at the edges of the salt lake of Januvio, adjoining the south-western coast of Lanzarote, on the 26th of March 1859.

911 *Bledius cornutissimus*, n. sp.

*B* capite prothoraceque leviter alutaceis, subnitidis, illo nigro utrinque tuberculo elongato (præsertim in maribus) instructo, hoc nigropiceo subquadrato canaliculato parce et sat profunde punctato, elytris densius sed minus profunde punctatis, rufis sed versus scutellum obsolete nebulosis, abdomine nigro, apice dilutiore, antennarum pedibusque rufo-testaceis, illis paulo obscurioribus

*Mas* prothorace antice in medio cornu longissimo, porrecto, angustissimo, aciculati, tereti, lævi, etiam ultra caput ducto, armato — Long corp. ln 2

*Habitat* Lanzarotam et Fuerteventuram, per omnes arenas maritimas necnon in Salinis fodiens

Apart from its brightly rufescent elytra and rufo-testaceous limbs, this singular *Bledius* may readily be known by the immensely elongated, narrow, aciculate, glabrous, and porrect horn with which the prothorax of its males is armed in the centre of the anterior margin. In the opposite sex the prothorax is quite simple, but in both (though more particularly the male) the head is furnished on either side (at the insertion of the antennæ) with an oblong tubercle. Like the last species, it is extremely rare, and confined (so far as I have observed hitherto) to the sandy shores (and salt places generally) in Lanzarote and Fuerteventura. In the former I took it sparingly both at the Salinas (or salt-works) in the north of the island and on the beach to the south of Anicife, whilst in the latter I met with it, beneath marine rejectamenta, about a mile to the south of Puerto de Cabras.

912 *Bledius galeatus*, n. sp.

*B* angusto-subcylindricus, capite prothoraceque grosse alutaceis, subopacis, illo nigro utrinque tuberculo elongato (præsertim in maribus) instructo oculis parvis (sed prominentibus), hoc piceo-nigro subquadrato canaliculato parce et sat profunde punctato, elytris brevibus, densius sed minus profunde punctatis, piceis vel rufo-piceis sed versus scutellum paulo obscurioribus, abdomine nigro, apice vix dilutiore, antennarum pedibusque brevibus, piceis, tarsis testaceis

*Mas* prothorace antice in medio cornu elongato subdecurvo, versus apicem gradatim angustissimo, haud ultra caput ducto et ad illum adpresso armato — Long corp. ln 2

*Habitat* Lanzarotam borealem, in Salinis degens

In the greatly-produced, narrow, and acute process with which the anterior margin of its male pronotum is armed this *Bledius* belongs to the same type as the preceding one, nevertheless the prothoracic horn of the *B. galeatus* is not quite so elongated (seeing that it does not extend beyond the extreme outline of the head), and it is also differently shaped—being gradually narrowed from the base to the

apex, and also slightly bent downwards, following the curvature of the pronotum (instead of being raised or porrect), and therefore more closely applied against the head. This curious arrangement causes the horn-like appendage of the pronotum to press against and protect the head (as it were with a helmet)—a circumstance which has suggested the trivial name of the species. In less important details the *B. galeatus* is narrower and more cylindric, and of an altogether darker hue, than the *cornutissimus*, its eyes, although equally prominent, are smaller, and its elytra and limbs are shorter. It is quite as scarce as either of the preceding species—the only three examples which I have seen having been captured by myself, during March 1859, at the Salinas, in the north of Lanzarote.

### Genus 333 PLATYSTETHUS

Manneheim, *Brachel* 46 [script *Platysthetus*] (1831)

#### 913 *Platystethus cornutus*

*Oxytelus cornutus*, *Grav*, *Col. Micropt.* 109 (1802)

*Platysthetus cornutus*, *Staph*, *Ill. Brit. Ent.* v. 311 (1832)

— — —, *Erich*, *Gen. et Spec. Staph.* 782 (1839)

— — —, *Kiaatz*, *Nat. der Ins. Deutschl.* ii. 841 (1857)

*Habitat* Lanzarotam, Fuerteventuram, Teneriffam et Gomeram, in lutosus, passim.

This common European insect, which occurs rarely at Madeira, we may be pretty sure is universal at the Canaries. Hitherto, however, I have observed it only in Lanzarote, Fuerteventura, Teneriffe and Gomera, and it was taken in Fuerteventura and Gomera by Mr Gray and in Teneriffe and Gomera by Dr Crotch. It is found principally in muddy spots at low and intermediate elevations. My Teneriffan specimens are chiefly from the vicinity of Sta Cruz, the Puerto Orotava, and Souzal.

#### 914 *Platystethus fossor*

*P. cornuto* minor ac nitidior (sc. nitidissimus, nec alutaceus), parcius (tamen argute) punctulatus, elytris minus testaceis (sc. vel nigris, vel plus minus picescentioribus) antennarum articulo ultimo longiore, magis oblongo pedibusque subpallidioribus (sensim minus piceis).

*Mas* capite utrinque supra oculos sulculis duobus impresso necnon apice spinulâ acutissima aciculiformi porrecta armato abdominis segmento septimo subtus in medio late impresso (impressione scutiformi, postice ad utrumque latus carina obliqua brevi, vel potius dente elongato, terminata) necnon postice utrinque inter carinam et latus quasi bunciso (denticulum alterum obliquum efformante).

*Flem* capite haud (vel obsoletissime) sulcato necnon apice inarmato.

abdominis segmento sexto subtus in medio obsolete subtriangulati-  
ter elevato, septimo producto rotundato — Long corp lin  $1\frac{1}{2}$ — $1\frac{2}{3}$

*Platystethus spinosus*?, *Erich, Gen et Spec Staph* 784 (1839)

—— *fossor*, *Woll, Ins Mad* 603 (1854)

—— —, *Id, Cat Mad Col* 199 (1857)

*Habitat* in humidis lutosiis Lanzarotæ et Teneriffæ, minus frequens

Although (from description and recollection) I believe this *Platystethus* to be certainly identical with the Madenian *P fossor*\*, I think it far from improbable that it may also coincide with Erichson's *spinosus*—in which case the latter name will have the priority. Nevertheless, as I have no type of the *spinosus* to judge from, and Erichson's diagnosis of it makes no allusion to several important features (as, for instance, the *two* teeth on either side of the impression on the seventh abdominal segment of the males, and the disappearance of the sulci on the head of the opposite sex) which are conspicuous in the *fossor*, I do not think it would be safe, without further evidence, to treat it as conspecific with the *spinosus*. From the *cornutus* it may be known by its smaller size, more shining and rather more sparingly punctured surface (which is free from the minutely alutaceous sculpture which is always present in that insect), by its darker elytra (which are either entirely black or else picescent—but never with the disc actually testaceous), by its somewhat paler legs, and by the last joint of its antennæ being more elongated or oblong. Its male sex, also, recedes from the *cornutus* in having either side of its head (above the eyes) branded with two irregular sulci, though, as in that species, it is armed at each anterior angle with an exceedingly acute porrect spine (which, however, is smaller and less conspicuous than is the case in the *cornutus*). The few examples which I have seen from these islands were taken by myself—around Haria in the north of Lanzarote, and close to the Puerto Orotava in Teneriffe.

#### Genus 334 OXYTELUS.

Gravenhoist, *Col Micropt* 101 (1802)

#### 915 *Oxytelus piceus*

*Staphylinus piceus*, *Linn †, Syst Nat* 111 686 (1767)

*Oxytelus piceus*, *Erich, Gen et Spec Staph* 788 (1839)

\* I should state, however, that the few Canarian examples now before me are on the average rather larger than the Madenian ones, and have their mandibles less conspicuously cleft at the apex, but as the *Platystethi* generally are eminently variable in stature, and the mandibles are the *least* stable of their oral organs, I do not lay much stress upon this twofold fact.

† Although this common *Oxytelus* has always been identified with the *Staphylinus piceus* of the 'Systema Naturæ,' I believe that Mr Waterhouse has lately

*Oxytelus piceus*, *Woll, Ins Mad* 606 (1854)

— —, *Id, Cat Mad Col* 199 (1857)

*Habitat* Canariam, Teneriffam, Gomeram et Palmam, in stercore bovino et equino vulgaris

The European *O piceus*, which abounds at Madeira, is probably universal in these islands—occurring in the dung of cattle, at most elevations. Hitherto, however, I have observed it only in Grand Canary, Teneriffe, and Palma, but specimens are now before me which were taken in Gomera by Dr Crotch

#### 916 *Oxytelus sculptus*

*Oxytelus sculptus*, *Grav, Mon* 191 (1806)

— *longicornis*, *Mann, Brachél* 48 (1831)

— *sculptus*, *Erich, Gen et Spec Staph* 788 (1839)

— —, *Woll, Ins Mad* 607 (1854)

— —, *Id, Cat Mad Col* 199 (1857)

*Habitat* in humidis Canariæ, Teneriffæ Gomeræ et Palmæ. passim

As at Madeira, this European *Oxytelus* is more attached to decaying vegetable refuse and damp places generally, than to the dung of cattle, and it seems to be more local than the *piceus*. It is however widely spread over the archipelago, where in all probability it is universal. I have taken it in Grand Canary, Teneriffe, and Palma, and it was captured in Teneriffe and Gomera by Dr Crotch. My Grand-Canarian specimens are principally from Teror, and the Teneriffan ones from the vicinity of the Puerto Orotava, the Agua Garcia, and Ycod el Alto

#### 917 *Oxytelus complanatus*.

*Oxytelus depressus*, *Gyll [nec Grav 1802], Ins Succ* 11 457 (1810)

— *complanatus*, *Erich, Kaf der Mark Brand* 1 595 (1837)

— —, *Woll, Ins Mad* 608 (1854)

— —, *Id, Cat Mad Col* 200 (1857)

*Habitat* insulas omnes Canarienses, late sed parce diffusus

The *O complanatus* (likewise European, and which abounds in Madeira) is not very common at the Canaries where, however, it is universal. I have taken it in Lanzarote, Grand Canary, Teneriffe, Palma, and Hierro, and it was found in Fuerteventura Teneriffe, Gomera, Palma, and Hierro by Mr Gray, and in Teneriffe and Gomera by Dr Crotch. It occurs both in the dung of cattle and beneath vegetable refuse generally

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stated that the *type* in the Linnean cabinet pertains to the insect which is universally recognized under the name of *sculptus*. But as there is at least a possibility of the (so called) "type" having been subsequently tampered with and it is most undesirable to create confusion concerning two species the nomenclature of which has been regarded hitherto as completely settled I would rather avoid all consideration of a question which can lead to no advantageous result practically—but quite the reverse

918 *Oxytelus nitidulus**Oxytelus nitidulus*, *Gray*, *Col Micropt* 107 (1802)— —, *Erich*, *Gen et Spec Staph* 795 (1839)— —, *Woll*, *Ins Mad* 609 (1854)— —, *Id*, *Cat Mad Col* 201 (1857)

*Habitat* insulas omnes Canarienses, in stercore bovino, equino, camelino, humano, ubique vulgaris

This abundant European *Oxytelus*, which is common in the Madeiran Group, is universal at the Canaries—in the whole seven islands of which I have myself captured it. In Lanzarote, Fuerteventura, and Gomera it was found likewise by Mr Gray, and in Teneriffe and Gomera by Dr Crotch. It occurs principally in the dung of cattle, and is independent of elevation.

919 *Oxytelus glareosus*.

*O* minutus, angustulus, opacus, densissime et grosse rugulosus, capite subquadrato, piceo-nigro, oculis parvis, prothorace rufo-ferrugineo, brevi, subsemicirculari (apice truncato, bisinuato), sulcis dorsalibus obsoletis, elytris (depressis) abdomineque nigro-fuscis, antennis ferrugineis, articulo ultimo acuminato, pedibus pallide testaceis — Long corp lin 1

*Oxytelus glareosus*, *Woll*, *Ins Mad* 610 (1854)— —, *Id*, *Cat Mad Col* 201 (1857)

*Habitat* Teneriffam, exemplar unicum (per aerem volitans) mox supra Portum Orotavæ deprehendi

The small bulk, opaque and densely rugulose surface of this *Oxytelus*, combined with its subquadrate, piceous-black head and minute eyes, its short, somewhat semicircular, rufo-ferruginous prothorax (on which the longitudinal sulci are almost obsolete), its dark-brown elytra and abdomen, its ferruginous antennæ (with their apically-acute terminal joint), and its pale-testaceous legs, will at once separate it from all the preceding species. Although decidedly common around Funchal in Madeira, it appears to be rare in these islands—though perhaps, from its small dimensions, it may merely have escaped observation. The only Canarian example which I have seen I captured (on the wing) immediately above the Puerto Orotava in Teneriffe.

## Genus 335 TROGOPHLEUS.

Mannerheim, *Brachel* 49 (1831)920 *Trogophleus transversalis*

*T* nitidus, niger (fere ater), elytris (amplis, depressis) postice læte rufo-ferrugineis, prothorace breviter subcordato, angulis posticis sat argute determinatis basi profunde transversim impresso, in

disco antico plus minus obscure trinitato, antennis fusco-piceis, pedibus saturate testaceis —Long corp  $ln$  vix  $1\frac{2}{3}$

*Trogophlæus transversalis*, Woll, *Cat Mad Col* 202 (1857)

*Habitat* Lantarotam, Fuerteventuram et Teneriffam, in humidis, rarissimus

In its rather large size, considerably developed, somewhat depressed elytra, and the deep transverse impression at the base of its prothorax, this *Trogophlæus* has a good deal in common with the European *scrobiculatus* (= *arcuatus*, Steph), but it is more finely punctured, its eyes are a little smaller, its antennæ are somewhat longer and less black, and the hinder portion of its elytra is gradually of a clear rufo-ferruginous hue. The species was enunciated in my Madeiran Catalogue from a unique example which I captured, in 1855, on the Southern Desert (or Bugio), and it appears to be nearly as rare at the Canaries as in the neighbouring Group. The very few specimens which I have seen were taken by myself—near Hama in the north of Lantarote, at La Antigua in Fuerteventura, and at the Agua Garcia in Teneriffe.

#### 921 *Trogophlæus riparius*

*T* subnitidus, niger, elytris sapius concoloribus (rarius picescentibus), prothorace subcordato (antice lato) in disco postico longitudinaliter bumpresso, antennis fusco-piceis, articulis duobus basalibus pedibusque rufo-testaceis —Long corp  $ln$   $1\frac{1}{2}$ — $1\frac{2}{3}$

*Trogophlæus riparius* Boisd et Lacord, *Faun Ent Paris*, 1 467 (1835)

— —, *Ench, Gen et Spec Staph* 807 (1839)

— —, *Kaatz Nat der Ins Deutsch* 11 871 (1856)

*Habitat* Canariam, Teneriffam et Palmam, hinc inde in humidis, late diffusus

I believe that this *Trogophlæus* is better referred to the European *T riparius* than to the *bilineatus*—its slightly larger size and stronger punctuation, combined with the two basal joints of its antennæ (and its entire legs) being rufo-testaceous seeming to identify it with the former, rather than the latter, of those species. It appears to be scarce, or at any rate local, in these islands—occurring in moist places at low and intermediate altitudes. I have taken it (chiefly on the wing) in damp cultivated spots near Teror in Grand Canary, around S<sup>ta</sup> Cruz and at the Agua Garcia in Teneriffe, as well as in Palma.

#### 922 *Trogophlæus bilineatus*

*T* præcedenti similis, sed paulo minor vix subtilius punctulatus prothorace antice sensim minus dilatato, foveis duabus dorsalibus magis interruptis antennis paulo brevioribus, nigrescentioribus fere con-

coloribus (articulo primo obscure piесcentiore), pedibus paulo minus rufescentibus — Long corp lin  $1\frac{1}{2}$

*Trogophlæus bilineatus*, *Erich, Kaf der Mark Brand* 1 600 (1839)

—— —, *Id, Gen et Spec Staph* 806 (1839)

—— —, *Klacz, Nat der Ins Deutsch* 11 872 (1856)

—— —, *Woll, Cat Mus Col* 201 (1857)

*Habitat* Canariam Grandem, semel tantum lectus

If the preceding species be rightly identified (as I believe to be the case) with the European *T riparius*, I think that the present one should decidedly be referred to the (equally common) *bilineatus*—even though, unfortunately, I have but a single example of it (taken by myself in the region of El Monte in Grand Canary) to judge from. The specimen now before me differs from the *riparius* in being a little smaller and less coarsely punctured, in its prothorax (which is somewhat less dilated anteriorly) having the two longitudinal foveæ down its disc a trifle more interrupted (or divided into four impressions), in its antennæ being appreciably shorter and darker (their *extreme* base only being very slightly diluted in hue), and in its legs being a shade less rufescent—all of which points, it will be perceived, are the very ones which are supposed to separate the *bilineatus* from the *riparius*. It occurs also, though sparingly, in Madeira.

### 923 *Trogophlæus exiguus*

*T bilineato* minor et angustior, oculis minoribus, prothorace paulo minus cordato (ad latera sensim magis æqualiter rotundato), foveis dorsalibus subobsoletis, antennis vix brevioribus — Long corp lin vix 1

*Trogophlæus exiguus*?, *Erich, Kaf der Mark Brand* 604 (1839)

—— —?, *Id, Gen et Spec Staph* 809 (1839)

*Habitat* Canariam Grandem, semel repertus

It is with doubt that I refer this *Trogophlæus* to the European *T exiguus*, but as I have only a single example to judge from, which certainly is *not* identical with any of the other species here enumerated, I think it better to assign it provisionally to some acknowledged member of the genus to treating it as new on insufficient evidence. It differs from all the preceding *Trogophlæi* in being considerably smaller and narrower (though it is not quite so minute as either of the following ones), in its eyes being less developed, and in its prothorax (which has the dorsal foveæ obscurely expressed) being a trifle less cordate (or less narrowed behind)—and, therefore, somewhat more *regularly* rounded at the sides. The only example which I have seen was captured by myself at Teirol in Grand Canary, during the spring of 1858.

924 *Trogophlæus ruficollis*, n sp

*T* subnitidus, capite abdomineque nigris, prothorace elytrisque testaceo-rufis, his (argute punctatis) antice obscurioribus, capite prothoraceque densissime rugoso-alutaceis (vix punctulatis), hinc ad basin obsolete transversim impresso (foveis dorsalibus nullis), antennis breviusculis, nigrescentibus, ad basin ipsam pedibusque saturate rufo-testaceis —Long corp  $\ln \frac{3}{4}$ —1

*Habitat* Fuerteventuram et Teneriffam, sub lapidibus, rarissimus

The rufous head and elytra (the latter of which, however, are rather obscured anteriorly) of this minute *Trogophlæus*, whilst its head and abdomen are black and its legs testaceous, will sufficiently distinguish it. Its prothorax has the dorsal impressions obsolete, but is lightly marked behind with a transverse (sometimes evanescent) fovea, and (together with the head) is very densely and coarsely alutaceous, and its elytra are somewhat sharply punctured. It is extremely rare, the few specimens which I have seen having been taken by myself at La Antigua in Fuerteventura and near the Puerto Orotava in Teneriffe.

925 *Trogophlæus bledioides*, n sp

*T* subopacus, niger vel fusco-niger, subtilissime densissimeque cinereo-sericeus, minutissime et densissime (in elytris vix profundius) punctulatus, capite parum magno, prothorace angusto, subcylindrico-cordato, integro (i.e. foveis nullis impresso) antennis brevibus, nigris, articulo primo (longiusculo) vix piccescentiore (articulo secundo sat aucto, sequentibus brevibus), pedibus pallide testaceis —Long corp  $\ln \frac{3}{4}$ —vix 1

*Habitat* Teneriffam et Gomeram, hinc inde haud infrequens

In its minute size, and very densely, delicately, and evenly punctulated head and prothorax, the latter of which is perfectly free from all traces of impressions or foveæ, this little *Trogophlæus* has evidently much in common with the *T. simplicicollis* of the Madeiran Group, nevertheless (although I have at present no type of the latter for comparison) I am satisfied (both from recollection and the diagnosis) that it is truly distinct from it. It is remarkable, *inter alia*, for its head being rather large and wide (for a *Trogophlæus*), for its prothorax being narrow and elongate (instead of transverse), and for its entire colour (except the legs which are pale testaceous) being of a dark brownish-black. Its wings are immensely developed, and its antennæ are abbreviated—with their basal joint a little longer, the second a trifle more enlarged, and the following ones shorter than is the case in the *Trogophlæus* generally. It is extremely local, but perhaps not uncommon if searched for in the proper situations, though its very diminutive size renders it liable to escape detection. On one

occasion I observed it in tolerable abundance (on the wing) immediately outside the Puerto Orotava in Teneriffe, and several specimens are now before me which were captured by Dr Crotch in Gomera

(Subfam IX HOMALIADES)

Genus 336 **PHILORINUM**

Kraatz, *Nat der Ins Deutsch* 11 965 (1856)

926 **Philorinum floricola**, n sp

*P linear-oblongum*, subopacum, subtilissime et brevissime pubescens, dense, sat profunde, argute et subæqualiter punctatum, nigrum, capite subconvexo, æquali, simplici (nec, ut mihi videtur, ocellato, nec lineato), prothorace (interdum fuscесcentiore) convexo, æquali, ad latera subæqualiter rotundato, elytris plus minus dilutioribus (vel testaceo-fuscis, vel fusco-testaceis, rarius fusco-nigris), abdomine multo levius parciusque punctulato, antennis rufo-testaceis (apicem versus interdum paulo obscurioribus), pedibus testaceis — Long corp lin 1-1 $\frac{1}{4}$

*Habitat* ad flores (præsertim *Cytisi* et *Spartu*) in Canaria, Teneriffa, Palma et Hierro, a 2000' usque ad 9000' s m ascendens

This *Philorinum* will probably be found in all the islands of the Group except Lanzarote and Fuerteventura, and, indeed, I have taken it in Grand Canary, Teneriffe, Palma, and Hierro. It occurs chiefly on flowers (particularly those of *Cytisus* and *Spartum*) at intermediate and lofty elevations, ascending to about 9000 feet above the sea. It is more often, however, to be met with in the higher altitudes, for on the two upland Cumbres of Teneriffe, above the Agua Mansa and Ycod el Alto respectively, I have (during May of 1859) brushed it in absolute profusion off the blossoms of the "Retama" (or *Spartum nubigena*). Nevertheless it does occasionally descend to an elevation of scarcely more than 2000 feet, inasmuch as I have also captured it (in Teneriffe) sparingly both at the Agua Garcia and in the laurel-woods above Taganana\*.

Genus 337 **HOMALIUM**

Gravenhorst, *Col Micropt* 116 [script *Omalum*] (1802)

927 **Homalium sculpticolle**, n sp

*H oblongo-ovatum*, depressum, nitidum, profunde punctatum, piceo-nigrum, capite subrotundato, postice longitudinaliter bifoveolato,

\* The *P floricola* was examined by Dr Kraatz, who returned it with the observation, "Genus *Philorinum* mihi, sp nov videtur, antennis concoloribus excellens"

prothorace transverso-quadrato antice paulo angustiore, angulis posticis argute subrectis, in disco postico longitudinaliter bifoveato necnon utrinque versus latera (subrecurvo-explanata) profunde impresso, abdomine nitidissimo, subtilissime et parce punctulato, antennis longiusculis, versus basin rufo-ferrugineis, pedibus saturate rufo-testaceis — Long corp ln  $1\frac{1}{4}$ – $1\frac{1}{3}$

*Habitat* in locis aliquanto elevatis Teneriffæ et Palmæ, rarissimum

This *Homalium* has much the general aspect, colour, and sculpture of the common European *H. rivulæ*, but it is considerably smaller, and rather more closely, finely, and sharply punctured, its head is narrower and less transverse, its prothoracic foveæ are more deeply impressed, its abdomen is very much more shining, being free from the alutaceous sculpture which is so conspicuous in that insect, and its antennæ are a little slenderer. It seems to be very scarce, and confined to intermediate and rather lofty elevations. I have taken it, from beneath small stones, in an open basaltic cavern at the base of the Organo Rocks (in the sylvan region above the Agua Mansa) in Teneriffe, and (more sparingly) in the district of the Banda in Palma.

#### 928 *Homalium pusillum*

*H.* angusto-lineare, valde depressum, opacum alutaceum punctulisque levissimis minutis in prothorace elytrisque parce irroratum nigropiceum, capite brevi, triangulari, basi (ad ocellos) breviter bifoveolato, prothorace transverso-quadrato postice paulo angustiore, angulis posticis argute subobtusis, anticis rotundatis, in disco postico longitudinaliter bifoveato necnon utrinque versus latera late impresso, antennis (brevibus, compactis) pedibusque rufo-testaceis — Long corp ln 1

*Homalium pusillum*, *Grav.*, *Mon.* 205 (1806)

———, *Steph.*, *Ill. Brit. Ent.* v. 353 (1832)

———, *Erich.*, *Gen. et Spec. Staph.* 879 (1839)

———, *Kautz.*, *Nat. der Ins. Deutschl.* ii. 988 (1856)

*Habitat* Teneriffam sylvaticam, sub cortice *Pinus canariensis* cujusdam laxo ad Agua Mansa exemplar unicum collega

I can see nothing to separate the single specimen now before me from the European *H. pusillum*, except that the prothorax has its foveæ rather deeper, and, together with the elytra, is a trifle more distinctly punctured, and consequently, as such differences (which are merely in degree, and not in kind) are scarcely worth noticing, I have referred it without hesitation to that species. The example from which the above diagnosis has been compiled I captured at the Agua Mansa in Teneriffe, from beneath the loosened bark of a felled *Pinus canariensis*.

## (Subfam X PROTINIDES)

Genus 338 **MEGARTHURUS**(Kirby) Stephens, *Ill Brit Ent* v 330 (1832)929 *Megarthus longicornis*

*M* nigro-fuscus prothorace paulo rufescentiore, subopacus, profunde asperato-punctatus, capite (interdum fere nigro) antice inter oculos plus minus producto et sæpe recurvo, utrinque latissime subconcavo, prothorace profunde canaliculato, basi in medio sinuato et mox intra basin leviter transversim impresso, ad angulos posticos exciso necnon ad latera in medio obsoletissime subangulato, antennis subgracilibus, longiusculis (articulis intermediis sat elongatis, conspicue obconicis), niresentibus, ad basin piceis, pedibus rufo-testaceis — Long corp lin 1-1½

*Megarthus longicornis*, *Woll, Ins Mad* 615 tab xiii f 9 (1854)

——, *Id, Cat Mad Col* 206 (1857)

*Habitat* in Lanzarota, Canaria, Teneriffa et Hierro, sub quibus in inferioribus intermediisque degens

This *Megarthus* is nearly allied to the European *M sinuaticollis*, but has its antennæ rather longer and slenderer, the intermediate joints being very conspicuously more elongated and obconical, its head is a little more produced in front, where it is frequently somewhat recurved, its prothorax is less rounded at the sides, and only *very obsoletely* subangulated in the middle, as also more decidedly sinuated (and transversely impressed) in the centre of its base, and its entire sculpture is coarser. I do not see that it differs specifically from the Madeiran *M longicornis*, for although in Madeira two of its main features (namely, the rather elongated antennal joints and the slightly produced head) are usually a trifle more expressed, the examination of a very extensive series of Canarian specimens has convinced me that the clypeus, at all events, is subject to great variation—being sometimes considerably recurved, sometimes comparatively deflected, and at others more or less transitional. It occurs beneath vegetable refuse at low and intermediate elevations, and is doubtless universal throughout the archipelago—though hitherto I have observed it only in Lanzarote, Grand Canary, Teneriffe, and Hierro. In Teneriffe and Hierro it was found likewise by Mr Gray, and in the former by Dr Crotch. My Teneriffan specimens are principally from the vicinity of St<sup>a</sup> Cruz and the mountains above it, Las Mercedes, and the Agua Garcia. Although both common and widely distributed in these islands, it is an extremely rare insect at Madeira.

Genus 339 **METOPSIA**Wollaston, *Ins. Mad.* 616 (1854)930 **Metopsia cimicoides**, n. sp.

*M. oblonga*, depressa, utrinque explanato-concava sed per medium subcarinata, pallide ferruginea, subopaca, grosse asperato-punctulata et antice granulis superadditis obsita capite transverso apice recte truncato et utrinque inciso postice in medio oculo instructo, prothorace canalicula polita notato basi intra angulos utrinque late exciso, antennis nigro-fuscis, articulo ultimo ferrugineo, articulis primo et secundo pedibusque rufo-testaceis — Long corp. lin.  $1\frac{1}{2}$

*Habitat* in lauretis excelsis Teneriffæ, in montibus supra Taganana. Maio a. d. 1859 semel reperta

One of the rarest of the Canarian Coleoptera—the only specimen which I have seen having been obtained in the damp laurel-woods of a high elevation in Teneriffe, on the mountains above Taganana, during May of 1859. It has consequently the same habits as the Madeiran *M. ampliata*, to which indeed it is closely allied. It is, however, unquestionably distinct from that species—being not only smaller and more oblong, but likewise paler and more coarsely punctured, with its prothorax more deeply bilobed in front (causing the anterior angles to be more porrect), and with its legs rather shorter, besides numerous minor differences which are better seen than described. Its *primâ facie* aspect and colour are so curiously suggestive of the common *Cimer lectularius*, that I have chosen the above trivial name as peculiarly appropriate.

## CORRIGENDUM

P 229 **CEPHALONCUS**—Not having seen Prof Westwood's diagnosis, when I prepared the MS. of this portion of the Catalogue, I was not aware that he had actually *published* the genus under the name (originally proposed by him) of "*Og. ocephalus*,"—he having merely informed me that the latter title (which I erroneously concluded *was still in litteris*) being apparently preoccupied, the name might be altered to *Cephaloncus*. And I consequently assumed that he had himself made the change *previous to publication*.





[illegible]

		Laur	Puat	Can	Ten	Gom	Palma	Hano
24	<i>Platyderus</i> , Steph.							
	73 alticola, W				*			
	74 tenuistriatus, W				*			
25	<i>Pterostichus</i> , Bon							
	75 crenatus, Dej	*	*					
	76 figuratus, W	*	*	*	*			
	77 longulus, Reiche	*	*	*	*			
	78 angularis, Br				*			
	79 harpaloides, W							*
26	<i>Amaia</i> , Bon							
	80 versuta, W	*	*					
27	<i>Zabrus</i> , Clairv							
	81 crassus, Dej				*			
	82 lævigatus, Zimm				*			
28	<i>Aristus</i> , Lat							
	83 subopacus, W		*					
29	<i>Cratognathus</i> , Dej							
	84 solitarius, W	*	*					
	85 fortunatus, W			*				
	86 micans, W				*	*		
	87 æmulus, W				*	*		
30	<i>Harpalus</i> , Lat							
	88 tenebrosus Dej	*	*				*	
	89 Schaumi, W				*		*	*
31	<i>Dichotrichus</i> , Dur							
	90 levistriatus, W	*						
32	<i>Stenolophus</i> (Meg), Steph							
	91 vaporarium, F		*	*	*	*	*	
	92 marginatus, Dej			*	*	*	*	
	93 dorsalis F			*	*	*	*	
33	<i>Bradycellus</i> , Erich							
	94 ventricosus, W				*			
34	<i>Trechus</i> , Clairv							
	95 deterrent, W	*	*					
	96 flavolimbatus, W			*	*	*	*	*
	97 felix, W				*			
35	<i>Thalassophilus</i> , W							
	98 Whitei, W			*	*	*	*	
36	<i>Perileptus</i> , Schaum							
	99 nigritulus, W				*			
37	<i>Tachys</i> (Ziegl), Steph							
	100 bistriatus, Dufts					*		
	101 scutellaris, Germ	*						
	102 centromaculatus, W	*						
	103 curvimanus, W	*	*	*	*	*	*	
	104 hæmorrhoidalis, Dej			*	*	*	*	
38	<i>Bembidium</i> , Lat.							
	105 biguttatum, F			*				
	106 vicinum, Luc	*	*					
	107 atlanticum, W	*	*	*	*	*	*	*
	108 concolor, Br	*	*	*	*	*	*	*
	109 subcallosum, W			*	*	*	*	*
	110 inconspicuum, W			*	*	*	*	*
	111 lætum, Br	*	*					

	Lanz	Fuert	Can	Ten	Gom	Palma	Hiero
38 <i>Bembidum</i> , Lat (continued)							
112 Crotchii, W						*	
113 marginicollis, W				*			
<b>Fam 2 Dytiscidae.</b>							
39 <i>Halplus</i> , Lat							
114 suffusus, W			*		*		
40. <i>Hydoporus</i> , Clairv			*				
115 musicus, Klug			*				
116 confluent, F		*			*		
117 geminus, F		*					
118 minutissimus, Germ			†	*	*	*	
119 delectus, W				*			
120 xanthopus, Steph				*			
121 planus, F				*			
122 Clarkii, W		*		*			
123 Ceresyi, Aubé							
124 tessellatus, Aubé	*		*	*	†	*	
41 <i>Laccophilus</i> , Leach			*	*			
125 inflatus, W			*	*	†		
42 <i>Colymbetes</i> , Clairv							
126 coriaceus, Lap			*	*			
43 <i>Agabus</i> , Leach							
127 nebulosus, Forst			*	*			
128 biguttatus, Oliv			*	*			
129 consanguineus, W				*		*	
44 <i>Cybister</i> , Curt							
130 africanus, Lap			*				
45 <i>Dytiscus</i> , L							
131 circumflexus, F							
46 <i>Eunectes</i> , Eich							
132 subdiaphanus, W			*				
<b>Fam 3 Gyrinidae</b>							
47 <i>Gyrinus</i> , Geoffr							
133 striatus, F			*	*			
134 urnator, Illig			*	*	*		
135 Dejeanni, Br			†	*			
<b>Fam 4 Parnidae.</b>							
48 <i>Parnus</i> , F							
136 prolifericornis, F			*	*	*	*	
<b>Fam 5 Helophoridae.</b>							
49 <i>Helophorus</i> , F		*					
137 longitarsis, W							
50 <i>Ochthebius</i> , Leach	*	*	*				
138 4-foveolatus, W							
139 pygmaeus, F			†	*	*		
140 lapidicola, W			†	*			
51 <i>Hydraena</i> , Kugel				*		†	
141 sinuaticollis, W				*			
142 serricollis, W				*			
143 quadricollis, W				*			





Fam 15 Colydiadæ

- 85 *Monotoma*, Hbst  
 202 *spmicollis*, Aubé  
 203 *picipes*, Hbst  
 204 *quadriricollis*, Aubé  
 205 *4-foveolata*, Aubé  
 86 *Tarphus* (Germ.), Erich  
 206 *simplex*, W  
 207 *camelus*, W  
 208 *canariensis*, W  
 209 *erosus*, W  
 210 *quadratus*, W  
 211 *congestus*, W  
 212 *gigas*, W  
 213 *caudatus*, W  
 214 *deformis*, W  
 87 *Cossyphodes*, Westw  
 215 *Wollastoni*, Westw  
 88 *Aulonum*, Erich  
 216 *sulcicollis*, W  
 89 *Aglenus*, Erich  
 217 *brunneus*, Gyll  
 90 *Eunops*, W  
 218 *impressicollis*, W  
 219 *duplicatus*, W

[illegible]

Fam 16 Cuculidæ

- 91 *Caulonomus*, W  
220 rhizophagoides, W  
92 *Læmophlæus*, Erich  
221 granulatus, W  
222 clavicollis, W  
223 pusillus, Schon  
93 *Pediacus*, Shuck  
224 tabellatus, W  
94 *Xenoscelus*, W  
225 deplanata, W  
95 *Silvanus*, Lat  
226 dentatus, Mshn  
227 surinamensis, L  
228 nubigena, W

Fam 17 Telmatophilidæ.

- 96 *Diphyllus*, Steph  
229 *lunatus*, F  
97 *Thallestus*, W  
230 *subellipticus*, W  
231 *trophæoides*, W

Fam 18 Cryptophagidæ.

- 98 *Cryptophagus*, Hbst  
232 *dentatus*, Hbst  
233 *affinis*, St  
234 *obesulus*, W

		Lanz	Fuert	Can	Ten	Gom	Palma	Hierro
98	<i>Cryptophagus</i> , Hbst (continued)							
	235 fusiformis, W				*			
	236 hesperius, W			*	*	*	*	*
99	<i>Mnionomus</i> , W							
	237 ellipticus, W				*			
100	<i>Leucohmatrum</i> , Rosenh							
	238 elongatum, Eich						*	
101	<i>Paramecosoma</i> , Curt							
	239 simplex, W		*			*		
102	<i>Hypocopus</i> , Mots							
	240 Hochuthi, Chaud				*			
103	<i>Atomaria</i> , Steph							
	241 pilosula, W	+	+	+	+	+	+	+
	242 canariensis, W				*		*	*
	243 ruficollis, W				*		*	*
104	<i>Epistenus</i> (Westw.), Steph							
	244 gynoides, Mshn			*	*	*		
Fam 19 Latridiadae								
105	<i>Holoparamecus</i> , Curt							
	245 caularum, Aubé	+						
	246 niger, Aubé				+			
	247 singularis, Beck	*						
106	<i>Corticaria</i> , Mshn							
	248 fulva (Chevr.), Mann	+			+			
	249 maculosa, W	+	+		+	+	+	+
	250 serrata, Payk	+	+		+			
	251 angulata, W	+	+	+	+			
	252 curta, W	+	+	+	+	+	+	+
	253 tenella, W			+	+	+	+	+
107	<i>Latridius</i> , Herbst							
	254 minutus, L			+	+	+	+	+
	255 opacipennis, W				+			
	256 ruficollis, Mshn	+						
Fam 20 Mycetophagidae								
108	<i>Myrmecoxenus</i> , Chev							
	257 sordidus, W		+					
109	<i>Symbiotes</i> , Redt							
	258 pygmaeus, Hampe						*	
110	<i>Typhaea</i> (Kby.), Steph							
	259 fumata, L	+	*		*	*		
111	<i>Litargus</i> , Erich							
	260 trifasciatus, W					*		
Fam 21 Dermestidae								
112	<i>Dermestes</i> , L							
	261 vulpinus, F							
	262 Frischi, Kugel	+		*	*	*		
113	<i>Attagenus</i> , Lat							
	263 pellio, L							
	264 Schaefferi, Hbst				*			
* 114	<i>Telopes</i> , Redt							
	265 obtusus Gvll							

		Lanz	Puert	Can	Ten	Gom	Palma	Hierro
114	<i>Telopes</i> , Redt (continued)							
	266 anthrenoides, W			*				
	267 multifasciatus, W			*				
	268 fasciatus, W				*	*		
115	<i>Anthrenus</i> , Geoffi							
	269 varius, F	*	*	*	*			
	270 claviger, Erich					*		
Fam 22	<b>Byrrhidae</b>							
116	<i>Syncalyptra</i> (Dillw.), Steph							
	271 integra, W							*
	272 ovuliformis, W				*			
Fam 23	<b>Histeridae</b>							
117	<i>Hololepta</i> , Payk							
	273 Pénaudieri, de Mars.				*	*		
118	<i>Teietrius</i> , Erich							
	274 cylindricus, W				*			
119	<i>Eutryptus</i> , W							
	275 putricola, W	*	*	*	*	*		*
120	<i>Hister</i> , L							
	276 major, L			*	*			
	277 canariensis, W				*			
121	<i>Carcinops</i> , de Mars							
	278 14-striatus, Steph	*	*		*	*		
122	<i>Saprinus</i> , Erich							
	279 nobilis, W				*			
	280 osculans, W		*					
	281 nitidulus, F	*			*			
	282 subnitidulus <sup>2</sup> , de Mars	*	*	*				
	283 chalcites, Illig	*	*	*	*	*	*	
	284 fortunatus, W	*	*	*				
	285 ignobilis, W	*	*					
	286 minyops, W	*	*	*				
	287 angulosus, W	*						
	288 mundus, W	*	*					
	289 erosus, W	*	*					
	290 lobatus, W	*	*	*				
123	<i>Xenonychus</i> , W							
	291 fossor, W		*					
124	<i>Eubrachium</i> , W							
	292 punctatum, W				*		*	
	293 ovale, W							*
	294 politum, W	*						*
125	<i>Acritus</i> , Le Conte							
	295 punctum, Aubé	*			*	*	*	
	296 minutus, Hbst		*	*	*	*	*	
Fam 24	<b>Thorictidae</b>							
126	<i>Thorictus</i> , Germ							
	297 gigas, W			*				
	298 canariensis, W	*	*	*	*	*	*	*
	299 vestitus, W	*						







		Lanz	Puert	Cam	Ten	Gom	Palma	Hierro
164	<i>Xyletinus</i> , Lat (continued)							
	395 brevis, W							
	396 excavatus, W			*			*	
165	<i>Notiomimus</i> , W							
	397 fimicola, W	*	*					
	398 holosericeus, W				*		*	
	399 punctulatissimus, W			*				
166	<i>Anobium</i> , F							
	400 velatum, W	*				*		
	401 villosum, Br				*			
	402 paniceum, L	*		*	*	*		
	403 molle, L						*	
	404 striatum, Oliv				*		*	
	405 cryptophagoides, W				*		*	*
167	<i>Ptilinus</i> , Geoffr							
	406 lepidus, W				*	*	*	
Fam 41 Bostrichidæ								
168	<i>Xylopertha</i> , Guér							
	407 barbifrons, W						*	
169	<i>Dinoderus</i> , Steph						*	
	408 brunneus, W				*	*	*	
Fam 42 Cioidæ								
170	<i>Cis</i> , Lat							
	409 lauri, W				*			
171	<i>Octotemnus</i> , Melhié							
	410 opacus, Melhié				*	*	*	
Fam 43 Tomicidæ								
172	<i>Tomicus</i> , Lat							
	411 nobilis, W						*	
	412 Saxeseni, Ratz				*		*	
173	<i>Xyloterus</i> , Erich		*					
	413 longicollis, W							
174	<i>Cryphalus</i> , Erich							
	414 aspericollis, W				*			
175	<i>Aphanarthrum</i> , W							
	415 Jubæ, W	*						
	416 armatum, W	*						
	417 glabium, W					*		*
	418 bicolor, W				*	*	*	*
	419 affine, W	*	*	*	*	*	*	*
	420 piscatorium, W				*	*	*	*
	421 bicornutum, W	*	*			*	*	*
	422 canariense, W			*	*	*	*	*
	423 luridum, W			*	*	*	*	*
	424 pusillum, W			*	*	*	*	*
	425 concolor, W				*	*	*	*
176	<i>Triotemnus</i> , W					*		
	426 subretusus, W					*		
177	<i>Luparthrum</i> , W							
	427 bituberculatum, W				*			
	428 curtum, W	*	*	*	*	*	*	*

177 *Lupatrum*, W (continued)  
429 *maritimum*, W  
430 *Lowei*, W

Fam 44 **Hylesinidae**

178 *Hylesinus*, F  
431 *indigenus*, W  
179 *Hylurgus*, Lat  
432 *ligniperda*, F  
180 *Hylastes*, Erich  
433 *Lowei*, Paiva

Fam 45 **Curculionidae**

181 *Eremotes*, W  
434 *crassicornis* Br  
182 *Rhyncholus* (Creutz), Germ  
435 *crassirostris*, W  
183 *Phloeophagus*, Schon  
436 *caulium*, W  
437 *laurineus*, W  
438 *affinis*, W  
439 *simplicipes*, W  
440 *piceus*, W  
184 *Pentatemnus*, W  
441 *arenarius*, W  
185 *Onycholips*, W  
442 *bifurcatus*, W  
186 *Mesoxenus*, W  
443 *Monizianus*, W  
187 *Mesites*, Schon  
444 *complanatus*, W  
445 *peisimulus*, W  
446 *proximus*, W  
447 *fusiformis*, W  
448 *pubipennis*, W  
188 *Sitophilus*, Schon  
449 *granarius*, L  
450 *oryzae*, L  
189 *Ceuthorrhynchus*, Schon  
451 *pollinarius*, Forst  
452 *quadridens*, Piz  
453 *nigrotellinatus*, W  
454 *pyrrhorhynchus*, Msh  
455 *phytobioides*, W  
456 *hesperus*, W  
190 *Acalles*, Schon  
457 *argillosus*, Schon  
458 *aemoni* (Chev), W  
459 *fortunatus*, W  
460 *xerampelinus*, W  
461 *nubilosus*, W  
462 *sigma*, W  
463 *senilis*, W  
464 *brevitarsis*, W

Lanz	*
Kuert	*
Can	*
Ten	*
Gom	*
Palma	*
Hierro	*

		Lon	Puert	Can	Ten	Gom	Palma	Iluro
190	<i>Acalles</i> , Schon (continued)							
	465 acutus, W			*	*		*	
	466 instabilis, W			*	*		*	*
	467 seticollis, W						*	
	468 pilula, W						*	
	469 verrucosus, W				*		*	
191	<i>Echinodera</i> , W				*		*	
	470 hystrix, W						*	*
	471 crenata, W							
	472 angulipennis, W				*			
	473 orbiculata, W				*			
	474 compacta, W				*			
	475 picta, W			*				
192	<i>Bandius</i> , Schon		*					
	476 sellatus (Chev), Schon		*					
193	<i>Nanophyes</i> , Schon							
	477 longulus, W			*	*			
	478 lunulatus, W			*				
194	<i>Sibynes</i> , Schon							
	479 sericeus, W	*	*	*	*			
195	<i>Tychius</i> (Germ), Schon							
	480 aridicola, W	*	*	*				
	481 decoratus, Rosenh		*	*				
	482 depauperatus, W		*	*				
196	<i>Auletes</i> , Schon							
	483 cylindricollis, W				*		*	
	484 anceps, W						*	*
	485 convexifrons, W			*	*		*	*
197	<i>Apon</i> , Hbst							
	486 senex, W						*	*
	487 vernale, F						*	*
	488 delicatulum, W						*	*
	489 sagittiferum, W		*	*	*	*	*	*
	490 Germari, Walt	*	*	*	*	*	*	*
	491 chalybeipenne, W		*	*	*	*	*	*
	492 calcaratum W				*		*	*
	493 Westwoodii, W			*			*	*
	494 tubiferum, Schon			*			*	*
	495 austrinum, W					*	*	*
	496 fallax, W	*		*	*	*	*	*
	497 rotundipenne, W			*	*	*	*	*
	498 ceuthorhynchoides, W			*	*	*	*	*
	499 umbrinum, W			*	*	*	*	*
	500 longipes, W			*	*	*	*	*
198	<i>Smicronyx</i> , Schon						*	*
	501 albosquamosus, W				*		*	*
	502 pauperculus, W			*	*		*	*
199	<i>Procas</i> , Steph						*	*
	503 Steveni, Schon		*				*	*
200	<i>Licus</i> , F						*	*
	504 anguinus, L			*	*		*	*
	505 anguculus, Schon		*	*	*		*	*
	506 Chawneri, W		*	*	*		*	*
	507 guttiventris, Schon	*	*	*	*		*	*

		Lanz	Fuert	Can	Ten	Gom	Palma	Hiero
201	<i>Bothynoderes</i> , Schon							
	508 Jekeli, W	*	+	*				
202	<i>Cleonus</i> , Schon							
	509 Armitagu, W				*			
	510 variolosus, W		+					
	511 tabidus, Oliv	*	+	*	*			
203	<i>Rhytidoderes</i> , Schon							
	512 siculus (Dup ), Schon	*	+	*				*
204	<i>Alophus</i> , Schon							
	513 magnificus, W				*			
205	<i>Hypera</i> , Germ							
	514 lunata, W	+	+	*	+		*	+
	515 irrorata, W	+	*					
	516 variabilis, Hbst	*	+	*	+	+	*	+
206	<i>Comatus</i> , Germ							
	517 tamarisci, F			*				
207	<i>Planthus</i> , Germ							
	518 musicus, W							
	519 velutinus, W				+			
	520 cucullus, W			*				
208	<i>Xenomercus</i> , W							
	521 apionides, W				*		*	
209	<i>Gronops</i> , Schon							
	522 lunatus, F	*	*		*			
210	<i>Rhytidorhinus</i> , Schon							
	523 brevitarsis, W	+	+					
211	<i>Brachycerus</i> , F							
	524 opacus, W	*						
212	<i>Atlantis</i> , W							
	525 canariensis, Schon				*			
	526 subnebulosa, W							
	527 tibialis, W			+	*		*	
	528 tetrica, Schon				*			
	529 angustula, W			*				
213	<i>Laparocerus</i> , Schon							
	530 morio, Schon				+	*		
	531 sculptus, Br						*	
	532 undatus, W				*			
	533 excavatus, W				*			
	534 grossepunctatus, W				*			
	535 squamosus, Br				*			
	536 crassirostris, W			*	*			
	537 crassifrons, W			*	*			
	538 scapularis, W			*	*			
	539 æthiops, W				*			*
	540 hirtus, W			*				
	541 inæqualis, W				*			
	542 globulipennis, W						*	
	543 occidentalis, W							
	544 obtriangularis, W				+			+
	545 ellipticus, W				+		*	
	546 lepidopterus, W				+		*	
	547 seniculus, W			*			*	*
	548 rasmus, W							

		Lanz	Iscl	Can	Ten	Gom	Pulu	Huan
213	<i>Lapanocer us</i> , Schon (continued)							
	549 mendicus, W							*
	550 obscurus, W				*			
	551 gracilis, W					*		
	552 dispar, W	*						
	553 vestitus, W				*			
	554 sulcirostris, W			*				
	555 compactus, W			*				
	556 tessellatus, B1			*	*			
	557 obsitus, W			*			*	*
	558 tenellus, W				*			
	559 puncticollis, W							*
214	<i>Trachyphloeus</i> , Germ				*			
	560 scaber, L							
215	<i>Lachenophagus</i> , W							
	561 auctus, W							*
	562 tesseraula, W				*			
	563 persimilis, W				*			
	564 subnodosus, W				*		*	*
	565 sculptipennis, W						*	
	566 impressicollis, W				*			
216	<i>Heipysticus</i> , Germ							
	567 eremita, Oliv			*	*	*	*	
	568 calvus, W	*	*					
	569 oculatus, W	*						
217	<i>Thylacites</i> , Germ							
	570 obesulus, W	*						
218	<i>Sitones</i> , Germ							
	571 gressorius, F				*	*	*	*
	572 latipennis, Schon			*	*			
	573 punctiger, W	*	*					
	574 cambricus, Steph			*	*			
	575 lineatus, L			*	*		*	
	576 humeralis (Kby), Steph	*	*	*	*	*	*	*
	577 setiger, W	*	*	*	*	*	*	*
219	<i>Brachyderes</i> , Schon							
	578 rugatus, W						*	
	579 sculpturatus, W			*	*			
Fam 46 <b>Bruchidæ</b>								
220	<i>Bruchus</i> , Geoffr							
	580 pisi, L	*	*	*	*	*	*	*
	581 rufimanus, Schon	*	*	*	*	*	*	*
	582 terminatus, W				*			
	583 Teneriffæ, Schon			*	*		*	
	584 floricola, W	*	*	*	*			*
	585 antennatus, W			*	*		*	
Fam 47 <b>Aglycyderidæ</b>								
221	<i>Aglycyderes</i> , Westw							
	586 setifer, Westw	*	*	*	*		*	
Fam 48 <b>Cerambycidæ</b>								
222	<i>Hylotypes</i> Serv							
	587 bajulus, L							

		Lanz	Fuert	Can	Ten	Gom	Palma	Hierro
223	<i>Blabnotus</i> , W							
	588 spinicollis, W				*		*	
224	<i>Oxypleurus</i> , Muls							
	589 pumicola, W						*	
225	<i>Criocephalus</i> , Muls							
	590 iusticus, L				*		*	
	591 pinetorum, W						*	
226	<i>Hesperophanes</i> , Muls							
	592 senex, W				*			
	593 ioidus, Br							
227	<i>Clytus</i> , F							
	594 Webbii, Lap				+			
228	<i>Gracilia</i> , Serv							
	595 pygmæa, F		*			*	*	
Fam 49 <i>Lamiadæ</i>								
229	<i>Leprosoma</i> (Dej.), Thoms							
	596 gibbum, Br		*		*			
230	<i>Stenidea</i> , Muls							
	597 annulicornis, Br				*		*	
	598 albida, Br	*	*		*			
	599 pilosa, W	*						
	600 Hesperus, W							*
231	<i>Agapanthia</i> , Serv			*	*	*		
	601 cardui, L							
Fam 50 <i>Crioceridæ</i>								
232	<i>Lema</i> , F							
	602 melanopa, L	*	*	*	*	*	*	+
233	<i>Criocerus</i> , Geoff							
	603 nigropicta, W			*				
Fam 51 <i>Eumolpidæ</i>								
234	<i>Pseudocolaspis</i> , Lap							
	604 divisa, W	*						
	605 dubia, W		*					
	606 splendidula, W			*			*	+
	607 obscuripes, W			*				
Fam 52 <i>Cryptocephalidæ</i>								
235	<i>Cryptocephalus</i> , Geoff							
	608 nitidicollis, W	*	*	*	*	+	*	*
	609 puncticollis, W				*		*	*
236	<i>Stylosomus</i> , Suff							
	610 biplagiatus, W		*					
Fam 53 <i>Chrysomelidæ</i>								
237	<i>Chrysomela</i> , L							
	611 sanguinolenta, L	*	*	*	*		+	
	612 bicolor, F	*	*	*				
	613 obsoleta, Br				*	*	*	
	614 fortunata, W					*		
	615 rutilans, W					+		
	616 gemina, Br						*	

		Lanz	Fuat	Can	Ten	don	Pahua	Hano
238	<i>Phædon</i> , Meg							
	617 menthæ, W							
239	<i>Phætor</i> (Chev ), Redt			*				
	618 vulgatissima, L						*	
Fam 54 <b>Gallerucidæ</b>								
240	<i>Calomicrus</i> , Steph							
	619 Wollaston, Paiva				*		*	*
Fam 55 <b>Halticidæ</b>								
241	<i>Haltica</i> , Geoffr							
	620 Allard, W				*			
	621 lubrica, W				*			
	622 varipennis, Boield				*			
	623 Paivana, W				*			
	624 plenifrons, W	*		*	*			*
	625 crassipes, W						*	
242	<i>Longitarsus</i> , Lat				*		*	
	626 kleimiperda, W				*	*	*	*
	627 persimilis, W				*		*	*
	628 messerschmidtæ, W				*		*	*
	629 ochroleucus, Msham		*	*	*		*	*
	630 brevipennis, W				*			
	631 strigicollis, W	*			*			
	632 nubigena, W				*	*		
	633 dorsalis, F	*			*			
	634 pusillus, Gyll				*			
	635 inconspicuus, W				*			
	636 vilis, W				*			
	637 fuscoæneus, Redt		*		*			
	638 echu Illig			*	*	*	*	
243	<i>Psyllhodes</i> , Lat				*	*	*	*
	639 hospes, W	*	*	*	*	*	*	*
	640 vehemens, W	*	*	*	*	*	*	*
	641 stolidæ, W	*	*					
244	<i>Dibolia</i> , Lat							
	642 obtusa, W		*					
245	<i>Chætocnema</i> , Steph							
	643 tarsalis, W			*				
Fam 56 <b>Hispidæ</b>								
246	<i>Hispa</i> , L							
	644 occator, Br				*		*	
Fam 57 <b>Cassididæ</b>								
247	<i>Cassida</i> , L							
	645 hemisphærica, Hbst			*	+		*	*
Fam 58 <b>Erotylidæ</b>								
248	<i>Xestus</i> , W							
	646 throscoides, W				*			





	Lanz	Fuert	Can	Ten	Gom	Palma	Hiero
267 <i>Pimelea</i> , F (continued)							
720 <i>granulicollis</i> , W		.	*				
721 <i>auriculata</i> , W			*				
Fam 67 <b>Coniomentidæ</b>							
268 <i>Crypticus</i> , Lat							
722 <i>punctatissimus</i> , W						*	
723 <i>navicularis</i> , Br				*			
724 <i>canariensis</i> , W				*			*
725 <i>oblongus</i> , W				*			*
726 <i>minutus</i> , Br			*				
Fam 68 <b>Pedinidæ</b>							
269 <i>Melasma</i> , W							
727 <i>lineatum</i> , Br	*	*					
Fam 69 <b>Opatridæ</b>							
270 <i>Cnemeplatia</i> , Costa							
728 <i>laticeps</i> , W				*			
271 <i>Sclerum</i> , Hope							
729 <i>asperulum</i> , W			*				
272 <i>Opatrum</i> , F							
730 <i>lutosum</i> , W	*	*					
731 <i>fuscum</i> , Hbst	*	*	*	*			
732 <i>hispidum</i> , Br	*	*	*	*	*	*	*
733 <i>oblitum</i> , W	*	*					
273 <i>Halonomus</i> , W							
734 <i>salinicola</i> , W	*		*				
274 <i>Melansis</i> , W							
735 <i>costata</i> , Bi			*			*	
736 <i>angulata</i> , W							
Fam 70 <b>Trachyscelidæ</b>							
275 <i>Pseudanemua</i> , W							
737 <i>brevicollis</i> , W	*	.					
276 <i>Trachyscelis</i> , Lat							
738 <i>aphodioides</i> , Lat	*	*	*				
Fam 71 <b>Phaleriadæ</b>							
277 <i>Phaleria</i> , Lat							
739 <i>cadaverina</i> , F					*		
740 <i>ornata</i> , W	*	*	*				
Fam 72 <b>Ulomidæ</b>							
278 <i>Gnathocerus</i> , Thunb							
741 <i>cornutus</i> , F		*	*	*	*	*	
279 <i>Tribolium</i> , MacLeay		*		*	*		
742 <i>ferrugineum</i> , F				*	*		
280 <i>Pseudostene</i> , W							
743 <i>fossoria</i> , W	*						
281 <i>Alphitobius</i> , Steph			*	*			
744 <i>diaperinus</i> , Kugel							
282 <i>Hypophæus</i> , F							
745 <i>pini</i> , Pnz							

		Lanz	Puot	Can	Ten	Gom	Palma	Huerto
282	<i>Hypophleus</i> , F (continued)							
746	euphoibæ, W	*		*	*			*
747	subdepressus, W		*					
<b>Fam 73 Cossyphidæ</b>								
283	<i>Cossyphus</i> , Oliv							
748	insularis, Lap				*			
<b>Fam 74 Tenebrionidæ</b>								
284	<i>Tenebrio</i> , L							
749	obscurus, F		*	*	*	*	*	
750	olivensis, W		*					
285	<i>Boiormorphus</i> , W							
751	parvus, W	*	*		*			
<b>Fam 75 Helopidæ</b>								
286	<i>Helops</i> , F							
752	altavagans, W				*			
753	elliptipennis, W				*			
754	congener, W			*	*		*	*
755	caibunculus, W				*		*	*
756	aterimus, W					*		
757	nitens, W				*			
758	quadratus, B.			*				
759	rimosus, W		*					
760	poriectus, W ..	*						
761	æthiops, W	*	*					
762	picescens, W	*	*					
763	fuscus, W				*			
<b>Fam 76 Cedemeridæ</b>								
287	<i>Ditylus</i> , Schmidt							
764	concolor, Br			*	*	*	*	
288	<i>Ischnomera</i> , Steph							
765	melanura, L							
<b>Fam 77 Meloidæ</b>								
289	<i>Meloe</i> , L							
766	tuccius, Rossi	*	*	*	*	*		
767	rugosus, Mshn				*	*		*
768	murinus, Brandt et Erich			*	*	*		
769	nudus, W		*					
770	subcyaneus, W	*						
<b>Fam 78 Mordellidæ</b>								
290	<i>Mordellistena</i> , Costa							
771	pumila, Gvll			*	*	*	*	
772	sericata, W	*	*					
291	<i>Anaspis</i> , Geoffr							
773	Proteus, W	*	*	*	*	*	*	*



	Lanz	Fuat	Can	Ten	Gom	Palma	Hiero
305 <i>Homalota</i> , Mann (continued)							
808 <i>amnigena</i> , W				*			*
809 <i>peisimilis</i> , W				*			
810 <i>longula</i> (Chevrolat), Heer	*			*			
811 <i>fragilis</i> ?, Kraatz				*	+	+	
812 <i>cusitans</i> , W	+			*			
813 <i>subsericea</i> , W	*						
814 <i>angustissima</i> , W	*						
815 <i>misella</i> , W							
816 <i>nigra</i> , Kraatz	*		+	+	*	*	+
817 <i>aleocharoides</i> , W				+	*	*	*
818 <i>atamentaria</i> , Gyll	*	*	*	+	*	*	*
819 <i>laeta</i> , W					*		
820 <i>canariensis</i> , W				*	*		
821 <i>vagepunctata</i> , W	*	*		*	*		
822 <i>clientula</i> , Eich	*	*	*	*		+	*
823 <i>coriaria</i> , Kraatz	*		*	*	*	*	
824 <i>subconaria</i> , W					*		
825 <i>putrescens</i> , W	*		*		*		
826 <i>cacti</i> , W				*			
827 <i>terricola</i> , W	*					+	
828 <i>Waterhousei</i> , W				*			
829 <i>melanaria</i> , Sahlb	*	*	+	*	*	*	+
306 <i>Orypoda</i> , Mann							
830 <i>exoleta</i> , Eich	*		*	*		*	*
831 <i>brevipennis</i> , W			+	*	*		
832 <i>aethiops</i> , W				*		*	
307 <i>Aleochara</i> , Grav							
833 <i>puberula</i> , Klug	*	*	*	*	*		
834 <i>crassiuscula</i> , Sahlb	*	*	*	*	*	+	
835 <i>littoralis</i> , W	+			*	*	*	
836 <i>funebria</i> , W				*	*	*	
837 <i>nitida</i> , Grav	+	*	*	*	*	+	*
838 <i>binotata</i> , Kraatz	*	*	*	*	*	*	
839 <i>morion</i> , Grav				+	*	*	
308 <i>Oligota</i> , Mann							
840 <i>castanea</i> , W				*	*	*	
841 <i>inflata</i> , Mann	*			+	*	*	
309 <i>Conosoma</i> , Kraatz							
842 <i>pubescens</i> , Payk						*	
843 <i>lividum</i> , Eich	*	+	+	*	*	*	
310 <i>Tachyporus</i> , Grav							
844 <i>pusillus</i> , Grav	*	*	*	*	*	*	*
845 <i>biunneus</i> , F	*		*	*	*	*	
311 <i>Habrocerus</i> , Eich							
846 <i>capillareicornis</i> , Grav							*
312 <i>Trichophya</i> , Mann							
847 <i>pilicornis</i> , Gyll				*		*	*
313 <i>Mycetoporus</i> , Mann							
848 <i>lufus</i> , W				*	*		
849 <i>monilicornis</i> , W				+			
850 <i>solidicornis</i> , W			*				
314 <i>Bolitobius</i> , Steph							
851 <i>lunatus</i> , W				*			

	Lanz	Fuert	Can	Ten	Gom	Palma	Hierro
314. <i>Bolitobus</i> , Steph (continued)							
852 filicornis, W			*	*			*
315. <i>Euryporus</i> , Erich							
853 princeps, W			*				
316 <i>Heterothops</i> (Kby), Steph							
854 minutus, W	*	*	*	*	*	*	*
317 <i>Quedus</i> (Leach), Steph							
855 angustifrons, W			*	*	*		
856 fulgidus, F				*	*		
857 megalops, W			*	*		*	*
318 <i>Creophilus</i> (Kby), Steph							
858 maxillosus, L		*		*	*		
319 <i>Ocypus</i> (Kby), Steph							
859 olens, Mull	*	*	*	*	*	*	*
860 brachypterus, Bt				*			
861 affinis, W				*		*	
862 umbricola, W				*			
863 curtispennis, W			*				
864 atratus, W	*	*					
865 subaenescens, W			*	*			*
866 punctatissimus, W	*	*					
320 <i>Philonthus</i> (Leach), Steph							
867 umbratilis, Grav				*			
868 sordidus, Grav	*	*		*		*	
869 xantholoma, Grav	*	*	*				
870 bipustulatus, Pnz	*	*	*	*	*	*	*
871 scybalarus, Nordm	*	*	*	*	*	*	*
872 marcidus, W	*	*	*	*	*	*	*
873 proximus, W				*	*		
874 discoideus, Grav	*	*		*			
875 nigrifolius, Grav	*		*	*	*		
876 simulans, W			*	*		*	*
877 punctispennis, W			*				
878 sericeus, Holme	*	*					
879 tenellus, W				*			
880 xantholinoides, W				*			
321 <i>Xantholinus</i> , Dahl							
881 marginalis, W	*	*					
882 hesperus, Erich			*	*		*	
883 punctulatus, Payk	*			*	*		
322 <i>Leptacnus</i> Erich							
884 parumpunctatus, Gyll	*	*	*	*	*	*	
885 linearis, Grav	*			*			
323. <i>Othius</i> (Leach), Steph							
886 brachypterus, W					*		
887 philonthoides, W			*				
324 <i>Achenum</i> (Leach), Curt							
888 subcaecum, W	*						
889 salinum, W	*						
325 <i>Lathrobium</i> , Grav							
890 labile, Erich				*			
891 multipunctatum, Grav				*		*	
326 <i>Dohcaon</i> , Lap							
892 nigricollis W	*		*				

326 *Dolichocn, Lap (continued)*  
893 ruficollis, W  
327 *Stilpnus, Lat*  
894 affinis, Erich  
328 *Scopaeus, Erich*  
895 trossulus, W  
896 nigellus, W  
329 *Luthocharis, Erich*  
897 quadiceps, W  
898 subconicaeae, W  
899 ochracea, Giav  
900 nigritula<sup>2</sup>, Erich  
901 melanocephala, F  
902 brevipennis, W  
903 debilicornis, W  
330 *Sunnus (Leach), Steph*  
904 myrmecophilus, W  
905 megacephalus, W  
906 dimidiatus, W  
907 palhdulus, W  
331 *Stenus, Lat*  
908 guttula, Mull  
909 aeneotinctus, W  
332 *Bledius (Leach), Steph*  
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911 cornutissimus, W  
912 galeatus, W  
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914 fossor, W  
334 *Oxytelus, Giav*  
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916 sculptus, Giav  
917 complanatus, Erich  
918 nitidulus, Giav  
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921 riparius, Lac  
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923 exiguus<sup>2</sup>, Erich  
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925 bledionides, W  
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337 *Homalium, Giav*  
927 sculpticollie, W  
928 pusillum, Giav  
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339 *Metopsea, W*  
930 cunicoides, W

[illegible]



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